

ICE CREAM FIELD



November 1950

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IAICM and NARICM Research, Sales Papers
The New Series: Automatic Merchandising
McClary's: Home of Quality Ice Cream

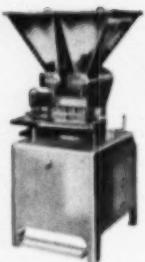
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AUTOMATIC FILLER
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CAPPER NO. 34-C

MODEL 106-2
WITH TWO HEADS



PORTABLE BAGGER
MODEL 134

This is a good time of the year to get your house in order for the coming busy season.

Anderson machines ordered now, can be functioning smoothly in your plant, with experienced operators capable of getting maximum production when you need it the most.

Why not check your equipment right now and then consult with us. Our sales engineers will gladly assist you in determining where efficiency can be improved and profits increased.

The several machines illustrated here are only a part of the Anderson equipment available. Write us today for literature and complete information.

VERTICAL STICK
DISPENSER
MODEL 171



STICK
CONFECTION
MOLDS



STICK HOLDER
MODEL 136



STICK SORTER
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Use this Handy Coupon for Quick Information

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**Extra-Strong, All-Steel Construction
Assures Long Service Life**

Now is the time when you want to take advantage of the well-honed expertise that will continue to give you efficient service and the best kind of protection. And that's where Safeway is your very best buy. You can't ever afford to. For today's Safeway, the Oscar Coliseum, can do more than ever before to protect your business. Safeway has Safeway without excessive compensation, making them the easiest to hire, train, reward and pull out for easy, low-cost results. And the unique quality of the Safeway delivery system saves time for both men-and-woman serving carts. Not to mention many other advantages Safeway has. Call Oscar Coliseum at your convenience. You'll be glad you did! Write or telephone: Oscar Coliseum, 2000 Avenue C, Sacramento, California 95811. (916) 445-1111.



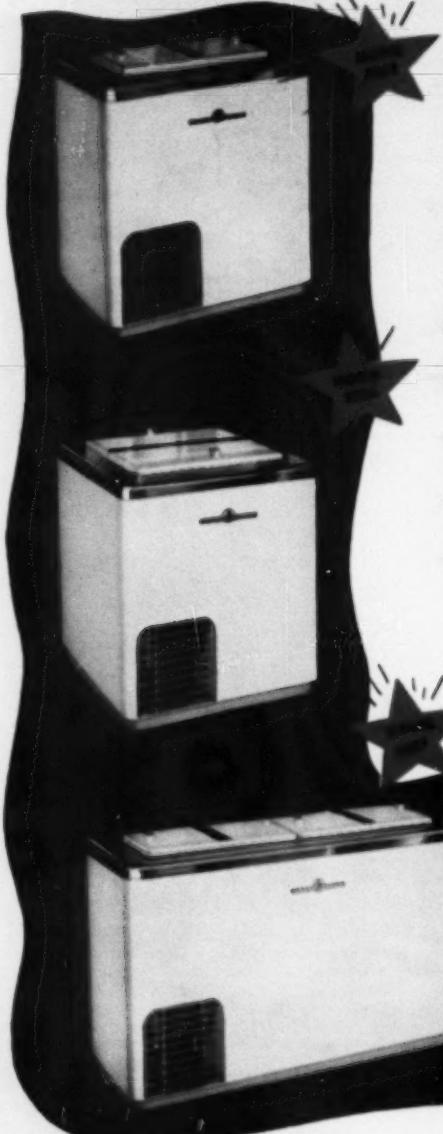
again in '50

again in '50
the SWING is to
SAVAGE
ICE CREAM CABINETS

**Compare These SAVAGE Features
With Any Other Cabinets!**

Now! **Kelvinator**

a Star Performer for



Roadside stand or ice cream parlor . . . there's a Kelvinator to fit that required floor space! Yes, a Kelvinator cabinet to fit that aisle, that counter, that corner your dealers have in mind! Most important, in every Kelvinator you get *maximum capacity in minimum floor space* . . . greater durability . . . lower operating costs. You get clean-lined beauty . . . unsurpassed dependability . . . all the experience of the pioneer builder of low-temperature

MORE of the Features that Mean MORE to your Dealers!

- ★ "Double-the-Width" lids . . . open from either side or end!
- ★ Maximum capacity in minimum floor space!
- ★ Cabinets designed for smooth, "in-line" fountain installation!
- ★ Galvanized steel tanks and copper tubing!
- ★ Even temperature distribution throughout cabinet!
- ★ Plenty of "easy-to-service" features!
- ★ Powered by efficient, trouble-free Polarsphere!

offers you- every type of store!

cabinets for the ice cream industry. All this, plus performance features that protect your product and speed its handling better than ever! Meet your specific needs with models from the complete line shown here. For complete details, see your Kelvinator representative or write for your copy of Kelvinator's new Ice Cream Cabinet Catalog. Kelvinator, Division of Nash-Kelvinator Corp., Detroit 32, Michigan.

DIMENSIONS—CAPACITIES—SHIPPING WEIGHTS

DIMENSIONS CAPACITIES

MODEL	LENGTH	WIDTH	HEIGHT	BULK	PACKAGE	APPROX. SHIP. WT.
32S3	31 $\frac{1}{2}$ "	21"	34 $\frac{3}{4}$ "	7 $\frac{1}{2}$ gal.	102 pints	238 lbs.
56S7	55 $\frac{1}{4}$ "	21"	34 $\frac{3}{4}$ "	17 $\frac{1}{2}$ gal.	254 pints	342 lbs.
30D6	30 $\frac{3}{4}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	15 gal.	226 pints	265 lbs.
43D9	42 $\frac{1}{4}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	30 gal.	403 pints	370 lbs.
54D13	53 $\frac{1}{4}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	40 gal.	560 pints	427 lbs.
66D17	66 $\frac{1}{2}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	55 gal.	766 pints	550 lbs.
88D21	88 $\frac{1}{4}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	72 $\frac{1}{2}$ gal.	952 pints	710 lbs.
KM-12	53 $\frac{1}{4}$ "	30 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	—	471 pints	499 lbs.





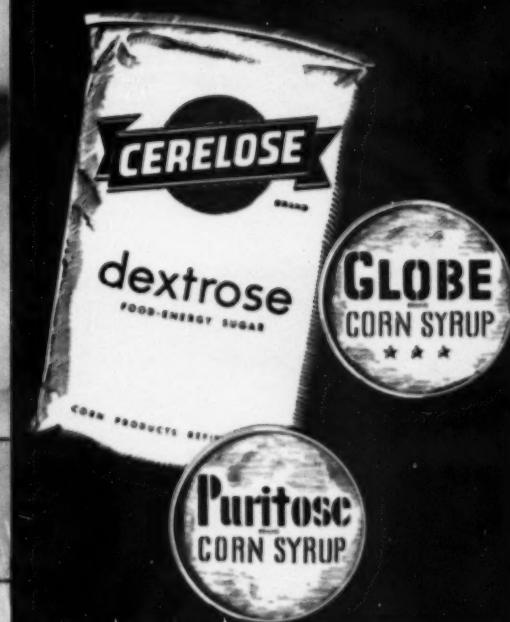
QUALITY

*better your product
better your sales...*

ICE CREAM manufacturers have found Puritose "high conversion" Corn Syrup performs better . . . is of consistently uniform high quality. In the manufacture of ices and sherbets Cerelose has won much favor . . . producing smoother products with a minimum of ice crystals.

Full technical service, no obligation
CORN PRODUCTS
REFINING COMPANY
17 BATTERY PLACE • NEW YORK 4, N. Y.

Globe, Cerelose and Puritose are registered trade marks of Corn Products Refining Company, New York, N. Y.





Wherever they go...
watch gallonage grow!

EMPIRE

POINTS

THE WAY

AGAIN!

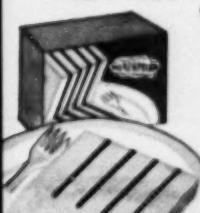
Send For NEW Empire
"Facts on File
About Sandwiches"

EMPIRE BISCUITS

30 Waverly Ave., Brooklyn 5, New York
Division of Ailine Foods

What's New?

NORTHPOLEON



Empire's great new dessert! A tempting layer cake of Empire Wafers and your ice cream. Pre-packaged for easy production. A dessert item that puts the accent on Ice Cream.

AN IMPORTANT MESSAGE from

Le Roy

FOODS, INC.

To everyone who manufactures, or who plans to manufacture a line of profitable

FROZEN CONFECTIONS

it will pay big dividends to get the full details of our *complete* program embracing equipment, supplies and merchandising now ready for presentation to the ice cream manufacturers of America.

THIS PROGRAM WILL REQUIRE NO TIE-INS OR ROYALTIES
and will give you a high-powered premium* and merchandising campaign.

You'll save time and MAKE MORE MONEY with Le Roy . . . leaders in production economy methods for the ice cream industry.

Ask the Le Roy salesman — or write, wire or phone for full details.

L.D. Overland *D.G. Palmer*

VICE PRESIDENT

PRESIDENT

*The premium offer does not apply in states where laws prohibit.

LOOK TO LE ROY FOR MOLDS, BAGS, STICKS, FLAVORS AND COMPLETE SUPPLIES
FOR THE MANUFACTURE OF FROZEN CONFECTIONS.

Le Roy

MONEY MAKERS for the ICE CREAM MANUFACTURER

The enthusiastic acceptance at Atlantic City of Le Roy's new "TINY TREAT" makes this item a worthy companion for the now famous patented Le Roy "BIG TREAT" Ice Cream Sandwich . . . the item that broke all sales and profit records this year!

Yes, sir . . . Le Roy has the "know-how" that produces production economies that enable you to make and sell sandwiches in quantities and profit! In addition, Le Roy has a complete promotion package of point-of-sale material, window streamers, decals, radio scripts, displays, etc., to help you get the best results from your sandwich promotion.

And . . . available soon, for those manufacturers who desire it . . . a long sandwich, the "LONG TREAT."

For a "shot-in-the-arm" for wintertime sales—get on the Le Roy Sandwich Bandwagon . . . it's going places!

Remember!

To make any Le Roy item, you need
NO MACHINERY •

NO SLAB MOULDS • NO EXTRUDERS
There's no double handling and no
messiness

Le Roy

FOODS, INC.

Mfrs. of Frozen Novelty Supplies and Equipment
290 S. 5th Street
BROOKLYN 11, N. Y.

BRANCH OFFICES AND WAREHOUSES:
Newark, N. J. • St. Louis, Mo.
Chicago, Ill. • Los Angeles, Cal.
Atlanta, Ga.

CANADIAN LICENSEE: FOOD ENTERPRISES, LTD.
Montreal & Winnipeg

TINY TREAT



The perfect "take-along" size, packed one dozen to a box. Ready with a special "new quality" flavor.

BIG TREAT



The "Kiddie" item is 7 oz. Three workers can make 400 dozen per hour. A new attachment is available which will produce 1000 dozen per hour.

LONG TREAT



Available soon, for those manufacturers desiring this type of sandwich.



Refrigerated Cabinet Division

ANHEUSER -

1951's OUTSTANDING VALUE



In addition to the 6-hole self-contained model shown, Anheuser-Busch builds a complete line including 2-, 3-, 4-, 8- and 12-hole self-contained models; a 10.4 cu. ft. Open Top; 14.0 and 21.3 cu. ft. Sliding Glass Tops, plus all sizes of Remote type installations.

WE URGE YOU TO CHECK AND COMPARE. You'll find that Anheuser-Busch cabinets have: 1. the **LOWEST INITIAL COST PER CUBIC FOOT OF USABLE SPACE.** 2. **ADVANCED DESIGN** assuring you of Uniform Temperatures, More Usable Space, Easier Servicing and Star-bright Beauty. 3. **TOP-QUALITY MATERIALS AND MASTER CRAFTSMANSHIP** assuring you of Long Cabinet Life, Dependability and Low Maintenance Cost.

Look to these magnificent new cabinets for **QUALITY** and **VALUE**. They are the true Aristocrats of Achievement in the ice cream field.

If you have not received literature giving complete information on the new 1951 models, please write —Refrigerated Cabinet Division, Anheuser-Busch, Inc., 9th and Wyoming, St. Louis, Missouri.

B U S C H , I N C .

Saint Louis, Missouri



II
foote & Jenks
Vanilla

FOOTE & JENKS • • JACKSON . MICHIGAN

Just call... that's all!

The illustration shows a woman with dark, curly hair and a surprised or excited expression. She is wearing a light-colored blouse with a ruffled collar and a dark jacket. She is holding a telephone receiver to her ear with her right hand. Her left hand is pointing towards a large, dark display board. The display board has a header that reads "CHERRY-BURRELL FOR SUPPLIES". Below the header, there is a grid of 16 rectangular boxes, each containing a different item from their supply list. The items listed are: CASE TRUCKS, SANITARY GASKETS, BOTTLES, CASES, BRUSHES, DAIRY PAINTS, BOTTLE CAPS, STEAM AND WATER HOSE, ALUMINUM LADDERS, OILS AND GREASES, SAFETY BOOTS, STATIONERY, WASHING POWDERS, LABORATORY GLASSWARE, MILK AND ICE CREAM CANS, FILTER DISCS AND CLOTHS, and ROUTE BOOKS.

All the supplies you need are no farther than your phone.

Just call your nearby Cherry-Burrell Branch or Associate Distributor . . . they maintain most complete stocks of the finest in supplies—and can serve you promptly.

CHERRY-BURRELL CORPORATION
General Sales and Executive Office:
427 W. Randolph Street, Chicago 6, Ill.
Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS
AT YOUR SERVICE IN 50 CITIES

trendmaker in a great industry

Another Masterpiece



Capacity 420 square pints or 270 round pints.

SPECIAL FEATURE: An additional high level refrigerated surface under superstructure and above front glass for constant temperature throughout.

ACE quality standards are exceptionally high, necessitating a constant vigilance in the test laboratory, checking and rechecking every square inch. You don't buy a display cabinet every day so don't settle for "any cabinet" because of price. It costs no more to own an ACE . . . by all standards, the FINEST. And in the long run, because it is trouble-free, it is the MOST ECONOMICAL, so why gamble? Be sure . . . insist on an ACE!

The new 1951 Model OG11C
ICE CREAM
Low Temperature
DISPLAY
CABINET

25% larger — 10% colder



ACE units are created by master engineers and designers who know, from experience, the type of merchandiser cabinets that do a terrific impulse-selling job.

THE BUSIEST PLACE IS AROUND AN ACE!!



CGD



CG510



8165



945



CGD

ACE CABINET CORP.

Manufacturers of Ice Cream Dispensing Cabinets, Home and Farm Freezers, Frozen Food Display Cabinets and Bobtails

Executive Sales Offices: 110 East 42nd Street, New York 17, N. Y.

Export Dept.: 10 Broadway, New York 6, N. Y.

NOW - at our expense TRY NEW, PURE

KOHNSTAMM VANILLA "1162"

26 Ounces Prime Bourbon Bean . . . Two-Fold

H. Kohnstamm's exclusive new process of extraction brings you a *pure*, more concentrated, better flavor vanilla that means finer taste for your ice cream—lower flavoring cost per mix!

Your customers and *their* customers will appreciate this true full-bodied vanilla. And because of the extra strength of Vanilla 1162, every ounce of this new extract goes much further—proved by actual plant tests! Ice cream flavored with Vanilla 1162 wins in every *comparison taste!* That's why we're particularly anxious for you to try it in *your* plant...*at our expense!*

FIRST PRODUCERS OF CERTIFIED COLORS

KOHNSTAMM & CO., Inc.

VANILLA DIVISION

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4735 DISTRICT BLVD., LOS ANGELES 11

ATLANTA • BALTIMORE • BOSTON • CINCINNATI • CLEVELAND • DALLAS • DETROIT
HOUSTON • INDIANAPOLIS • KANSAS CITY, MO. • MINNEAPOLIS • NEW ORLEANS
OMAHA • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO

ICE CREAM FIELD, November 1950



One Hundredth Anniversary

To take advantage of this Free Test offer, fill out and mail this coupon now to the branch nearest you.

VANILLA DIVISION

H. KOHNSTAMM AND CO., INC., DEPT. F-3

Send us test quantity of Vanilla 1162—26 oz.

Prime Bourbon Bean

Fortify with _____ oz. of Vanillin per gallon

NAME _____

COMPANY _____

ADDRESS _____

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ICE CREAM FIELD

VOL. 54

November

NO. 5



Staff: HOWARD B. GRANT, Publisher; SIDNEY M. MARAN, Editor; DR. C. D. DAHLE, Tech. Editor; ALEX E. FREEMAN, Business Manager; HARRY STAAB, Art Editor; JAY M. SANDLER and LOUIS TRANZILLO, JR., Adv. Mgrs.

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Naturally...

"IT TASTES
JUST RIGHT"



you get *Natural Body*...when you Stabilize
with **DARILOID or DRICOID**

- Ice cream with *Natural Body*...smooth and firm...and entirely free of gummy stickiness—these are the customer-pleasing results you get when you stabilize with Dariloid or Dricoid.

Because it has *Natural Body*, ice cream stabilized with Dariloid or Dricoid is "cool tasting" and refreshing...the kind that makes people say "It Tastes Just Right."

This proved ability to help produce ice cream that consumers prefer explains the industry-wide leadership of Dariloid and Dricoid. More ice cream is stabilized by Dariloid and Dricoid than by any other stabilizer or stabilizer-emulsifier.

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Dariloid XL
Dricoid®
Dricoid XL

PRODUCTS OF

KELCO COMPANY

20 N. Wacker Drive
Chicago 6

31 Nassau Street
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530 West Sixth Street
Los Angeles 14

Cable Address: Kelcoalgin — New York



RECORDS GO AT '50 SHOW



MANY key figures in the dairy processing field were among the record-breaking total of 22,500 persons who registered for the 17th Dairy Industries Exposition, held from October 16 to 21 in Convention Hall, Atlantic City, New Jersey.

Ralph L. Young, Chairman of the Exposition Committee, told exhibitors and registrants during ceremonies marking the final day of the show that "this Exposition's registrants were characterized both by a top-drawer quality and by the fact that nearly every executive was there on serious business. Every exhibitor to whom I have talked," reported Mr. Young, "has said that not only did he do a lot of business at the Exposition, but that he made new contacts for the future."

"Perhaps the word which best characterizes this Exposition," Mr. Wallace said, "is 'serious.' You saw it all over the Show, in nearly every booth. Exhibitors invariably commented on the fact that the men from the processing companies who came to see them wanted to talk business. They were seeking replacements or planning new equipment, and by and large, they wanted the best. They were looking for quality rather than bargains."

Of the many types of firms which supply and equip the dairy industries, the makers of processing equipment, much of it is stainless steel and other non-corrosive metals, reported the most concentrated buying. As one DISA

officer reported, "we felt that there was a consciousness on the part of the processor of the possibility of shortages in equipment requiring strategic metals. We did not sense any panic-buying, but we received the impression that there will be a tremendous stimulus in buying between now and the first of the year."

This same exhibitor said there had been more real interest displayed in the 1950 Show than in any other Exposition, according to his survey. "Things seemed to be moving quickly all through the Show. More representative executives of processing firms visited the displays than ever before, and this was true from the big companies down through the small local concerns. They knew what they needed, and came ready to discuss with us how we could get it to them. There was amazingly little discussion of price."

Interest in Export

There was considerable interest expressed in export business. For the first time the items available for export were so identified in the Exposition directory, and company representatives' language familiarities were listed.

"We were surprised at the amount of export business which we did," one company executive reported. "In spite of the difficulties of exchange we have arranged to make a

(Continued on page 68)



Why Monkey Around...

when the new 'JO-LO'
'LU-LU' Bar
is the Sure way
to winter gallonage!



Delicious, tempting "LU-LU" bars got what it takes: plenty of eye appeal for the kids and a "gimme more" flavor.

Tests in 20 major markets proved it a honey of a seller.

Write today and learn how the new 'JO-LO' "LU-LU" bar can be a great builder-upper for your fall and winter gallonage.

Popsicle® Fudgsicle®
Creamsicle® Dreamsicle® Ice Cream®

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JOE LOWE CORPORATION
601 WEST 28TH STREET NEW YORK 1, NEW YORK

JOE LOWE CORPORATION

BOX "D," 601 West 28th St., New York 1, N. Y.

Please send me full details on how the new "LU-LU" bar can earn me bigger returns for my particular operation.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



PRESIDENT-ELECT Ridgway Kennedy (right), and retiring President G. Stanley McKenzie talk over some business matters during the October convention of the International Association of Ice Cream Mfrs.

KENNEDY HEADS IAICM; NEW V.P. IS B. SWEETING

FIFTY years of service and progress were marked at the 46th annual convention of the International Association of Ice Cream Manufacturers which held business sessions from October 18 to 20 in the Hotel Traymore, Atlantic City, New Jersey.

As the industry's leading organization of ice cream wholesalers began its second half-century, Ridgway Kennedy, Jr., Abbotts Dairies, Inc., Philadelphia, was named 1950-51 President. He succeeds G. Stanley McKenzie, Creameries of America, Inc., Los Angeles, whose term began in October, 1948, and who was re-elected in 1949.

Bert Sweeting, Medosweet Dairies Company, Tacoma, Washington, was elected Vice-President. Treasurer I. N. Hagan, I. N. Hagan Ice Cream Company, Uniontown, Pennsylvania; Executive Secretary Robert C. Hibben, Washington, D. C.; and Assistant Treasurer O'Neal M. Johnson, Washington, D. C. were all re-elected.

Selected as new members of the association's Board of Directors were L. M. Hendler, Hendler's Creamery, Baltimore, Maryland; Paul Reinhold, Foremost Dairies, Jacksonville, Florida; Paul Miller, National Dairy Products Corporation, New York City; Dick Watson, Lake Charles, Louisiana; and J. Marcel Fortier, Quebec, Canada.

Board members who were re-elected for three-year terms included Jan Dreux (Pennsylvania), E. B. Darrow (New Mexico), W. M. Hawk (Oklahoma), J. J. Hayes (Minnesota), John Hazelton (Indiana), Walter Justin (Pennsylvania), T. B. Mayfield (Tennessee), John D. McEwen (Kansas), A. D. Reppert (Iowa), Clyde H. Shaffer (Pennsylvania), and Roy D. Wooster (New York).

With the biennial Dairy Industries Exposition opening its doors on October 16 to a record-breaking deluge of

visitors, registration for the International's conclave began the same day. On Wednesday morning, October 18, attendance picked up momentum and before the registration desks were abandoned on Friday, October 20, a near-record total of members and guests had been achieved.

Tuesday was observed as "Ice Cream Day" at Convention Hall. Appropriate ceremonies in honor of the industry were held the morning of October 17.

Joint General Session

Lead-off event on the International's program was a joint general session of the ice cream group and the Milk Industry Foundation. T. Kline Hamilton, President of the milk organization, welcomed the members and Mr. McKenzie responded with appropriate comments. Then papers were presented by Dr. A. C. Dahlberg of Cornell University ("Sanitary Milk and Ice Cream Legislation in the United States")—and by Miss Emily Bennett, Director of the Central Dairy Council, Louisville, Kentucky ("Your Plant in Your Schools"). A symposium on "Human Relations in Industry" concluded the first business meeting.

At the first meeting of the Production and Laboratory Council Wednesday afternoon, a presentation of "What Is New at the Dairy Industries Exposition" was offered by Cecil R. Preston, Richmond Dairy Company, Richmond, Virginia. President-elect Ridgway Kennedy and attorney Charles M. Fistere brought the audience up to date on "The Proposed Federal Ice Cream Standards." Then Dr. Paul H. Tracy of the University of Illinois discussed "Short Time High Temperature Pasteurization," after which Dr. Pearl Swanson of Iowa State College con-

(Continued on page 74)

Malt-A-Plenty

*keep fall and winter
profits high*

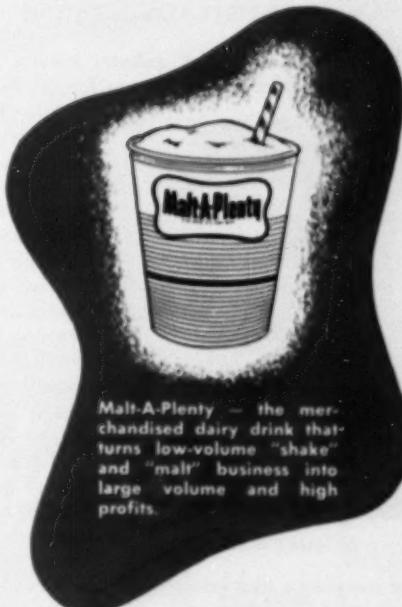


Malt-A-Plenty is a drink you can merchandise and sell all year 'round. Sure, spring and summer sales are higher, but Malt-A-Plenty will outsell usual "shakes" and "malted" ten to one... even in winter.

Now's the time to start getting your retail customers signed up for Malt-A-Plenty. Your winter sales and profits will jump, and you'll be ready with good distribution when the summer sun shines again.

WRITE FOR INFORMATION TODAY!

MALT-A-PLENTY, INC.
1635 E. 11th STREET
TULSA, OKLAHOMA



Malt-A-Plenty — the merchandised dairy drink that turns low-volume "shake" and "malt" business into large volume and high profits.

NARICM Elects Harry Burt

HARRY B. Burt of Burt's Good Humor Ice Cream Company, Tulsa, Oklahoma, is the new President of the National Association of Retail Ice Cream Manufacturers. Active for many years in industry affairs, Mr. Burt was elected at the association's 17th annual convention, held October 10 to 12 at the Hotel Mayflower, Washington, D. C.

Anthony G. Kainz of Kainz Dairy Stores, Chicago, was named First Vice-President. Moved up to Second Vice-President was S. Prestley Blake of Friendly Ice Cream Corporation, W. Springfield, Massachusetts. William Clegg of Silverwood Dairies, London, Ontario is the new Third Vice-President. Re-elected Secretary-Treasurer was E. G. Franklin of Franklin Ice Cream Company.

Ed M. Warder was re-elected Executive Secretary. Mr. Warder missed this convention due to ill health, but he

is recovering and expected again to take a hand in association work.

The directors of the association met October 9 and decided to hold the 1951 convention in Cincinnati, Ohio. Dates as yet have not been determined.

As in the past several years, the Ice Cream Breakfast proved the highspot of the conclave. Close to 400 people witnessed a program of entertainment and speeches that preceded the business meetings. Edward F. McCormack was master of ceremonies and introduced Arthur E. Jowett, retiring President, and Miss Sandra Stahl, each of whom gave an address of welcome. The full program of the Breakfast is described elsewhere in this issue and is accompanied by many photos of the event.

Merchandising and Production

Chairman of all merchandising sessions was Walter Dotterweich of Franklin Ice Cream Company, Cleveland. He was assisted throughout the sessions by L. E. Ricard of the same company and Bryce Thomson of Miller Dairy Farms, Eaton Rapids, Michigan. The main topics covered through the three days of discussions were (1) What Are We Going To Sell, and (2) How Are We Going To Advertise And Promote?

The production section was under the general chairmanship of Glenn T. Hoffman of High's Dairy Products Company, Washington, D. C. His co-chairman was James H. Skinner of Gifford Ice Cream Company, Silver Spring, Maryland. Featured speakers at the several production sessions included Dr. B. H. Webb of United States Department of Agriculture; Dr. C. D. Dahle of Pennsylvania State College; Dr. D. J. Hankinson of University of Massachusetts and Dr. W. S. Arbuckle of the University of Maryland. The three university authorities also judged the samples submitted to the ice cream clinic.

Intense interest at the meetings was focused on many excellent talks delivered by such authorities as Leon Bueler of Creamery Package Manufacturing Company, Chicago, on the subject "Cold Facts"; Dr. R. N. Doetsch of the University of Maryland on "Bacteriological Aspects of Retailed Ice Cream"; Robert T. Smith of Smith Laboratories, Scranton, Pennsylvania, on the topic "The Guinea Pig In Merchandising and Consumer Acceptance"; and Charles M. Fistere on the topic "Proposed Federal Standards." The principal guest speaker at the Fellowship Luncheon was Hon. Josh Lee of the Civil Aeronautics Board, Washington.

BURT HEADS NARICM

A long-time veteran of industry activity, Harry B. Burt of Burt's Good Humor Ice Cream Company, Tulsa, Oklahoma, has been elected 1950-51 President of the National Association of Retail Ice Cream Manufacturers. He succeeds Arthur E. Jowett, Miller Dairy Farms, Eaton Rapids, Michigan.

Mr. Burt is generally credited with originating the idea

of inserting a stick into a bar of chocolate-covered ice cream. This product is one of the centers of attraction in a recent motion picture entitled "The Good Humor Man," starring comedian Jack Carson.



HARRY B. BURT



There's more capacity!



They're more dependable!

More models
to choose from!



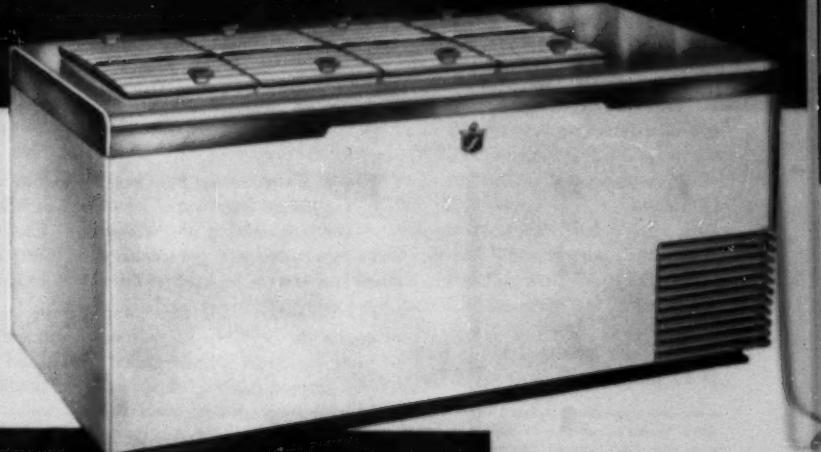
They sell more
gallonage!



"Schaefer Ice Cream Cabinets
give me **MORE** for my dollar!"



Attract
more
customers!



More in
appearance!

Schaefer

INC.

Manufacturers of
Schaefer Ice Cream Cabinets, Clearview Ice
Cream and Frozen Food Merchandising-Display
Cabinets, Pak-A-Way Home and Farm Freezers

SINCE 1929 • MINNEAPOLIS



More quality
protection!



I B
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M T

THE Third annual Ice Cream Breakfast of the National Association of Retail Ice Cream Manufacturers proved in many respects to be the most interesting and entertaining of these events. Close to 400 members, supply and equipment representatives, government and press guests witnessed the first Ice Cream Breakfast ever to be held in the nation's capital.

The Breakfast itself (featuring a huge bowl of ice cream on every table) was of course the headliner of the event. Unanimous approval was voted to the idea of using ice cream with breakfast cereals and fruits. Newspapermen and featured writers devoted columns of space in the leading Washington papers to this unique and highly successful program.

As Master of Ceremonies of the Breakfast held in the Grand Ballroom of the Hotel Mayflower, Edward F. McCormack of S. H. Mahoney Extract Company, did a superb job. He introduced Miss Washington of 1950 who not only welcomed the convention but also sang several songs in pleasing style. All through the morning entertainment by an accordionist, pianist and xylophonist was enjoyed by the ballroom crowd.

Howard B. Grant, Publisher of *ICE CREAM FIELD*, was introduced as the originator of the Ice Cream Breakfast, and talked on the "Development of the Ice Cream Breakfast Idea." He reviewed the previous breakfasts and underlined the importance of the program in acquainting the American public with the simple fact that ice cream should always be in the home for use every day and any hour of the day or evening.

Dr. R. E. Hodgson, Assistant Chief of the Bureau of Dairy Industry, United States Department of Agriculture, talked on "Why I Like Ice Cream" and underscored the high regard for ice cream in government circles. He was followed by



MISS WASHINGTON (Sandra Stahl) cuts the Ice Cream Breakfast cake as Ed McCormack and Art Jowett lend a hand.



PRESIDENT-ELECT Harry Burt sets a good example at the Ice Cream Breakfast, as he downs a gallon or so of vanilla at one sitting.

Dr. Harold S. Fritz of the American Youth Improvement Association who gave a humorous talk on ice cream. Feats of magic were performed by Herbert M. Ewell of the Pennsylvania Salt Manufacturing Company.

The third annual Breakfast was concluded with a talk on "Current Topics" by Hon. James H. Morrison, Congressman from Louisiana. Mr. Morrison expressed his wholehearted endorsement of the Ice Cream for Breakfast idea and then went on to describe the possibilities of controls being enforced on ice cream as well as other industries. He indicated that such controls are due the first of the year but assured the audience that they will not be discriminatory and that many leaders in Congress felt that controls would be reasonable and workable.

Newspaper reports of the event related how the ice cream manufacturers started "telling and showing their ice cream habits."

Carter Dawson, writing in the *Washington Star* on October 10, said that "the association came out the winner with this reporter, anyway, who for the benefit of *Star*

readers, even mixed marmalade with vanilla ice cream on a roll and found it tastes a lot better than it sounds." He reported that "the association was delighted with the mouthful."

Mr. Dawson noted: "One thing about eating an ice cream breakfast—your stomach, as well as your breakfast conversation, gets a new twist."

Commented Jeanne Rogers in the October 10 *Times-Herald*: "Love that ice cream."

She quoted a waiter at the *Moyflower Hotel* who was overheard to remark: "I'll be damned. Ice Cream for breakfast. Usually ends conventions around here."

Columnist Tom Donnelly, writing in the October 11 *Washington News*, told his audience: "I did try a dash of vanilla on my fruit cup and the result wasn't bad . . ."

He added, somewhat pointedly, however, that "I have discovered that the effect of ice cream in hot coffee is cold coffee."

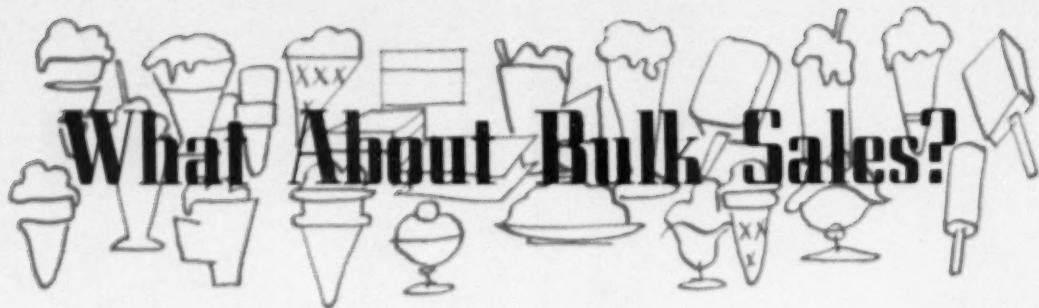
The ice cream consumed at the breakfast was provided by High's Dairy Products Company of Washington, D. C.

PICTURED AT the Third Annual Ice Cream Breakfast were (left to right): Congressman James Morrison of Louisiana, Edward Koenick of Ice Cream Mix Manufacturing Association, Howard B. Grant of ICE CREAM FIELD, Herbert Ewell of Pennsylvania Salt Mfg. Co., Paul Freed of High's Ice Cream Stores, Dr. R. E. Hodgson of U. S. Department of Agriculture and Mr. & Mrs. C. Y.

Stephens of High's Dairy Products at the speakers' table. Reading around the clock in the center photograph starting with Edward F. McCormack in the front left are Dr. C. W. England of High's, Arthur E. Jowett, retiring President, Mrs. England, Mrs. Jowett, Mr. & Mrs. Robert A. Smith of the Sealright Company, Miss Stephens and Robert Stephens of High's Dairy Products and Miss Wash-

ington of 1950, at another speakers' table. In the photograph at the right are: front foreground, Mr. & Mrs. Edward G. Fritz and Mr. & Mrs. Phil G. Fritz of the Grand Rapids Cabinet Company. Others in this group are Mr. & Mrs. Hobart Birmingham, Mr. & Mrs. H. J. Muldoon, Ford Johnston and C. G. Rollenhagen. The proverbial good time was had by all.





IF Mr. Hennerich had asked each of you to prepare this talk on increasing the sales of bulk ice cream, I am sure that that portion of our business would be increased. By so doing it would have brought to mind all the things we have been taught—told—on what we should do. We would be amazed we are putting into practice but little of our knowledge. Some in the industry are doing outstanding jobs on bulk ice cream through complete dealer training programs and merchandising. In most cases it is a matter of conversation. I am sure you would have ended up by going into a corner and giving yourself a pep talk—I did. What you would have found out and what I am going to tell you has been talked about at our International conventions for the past twenty-five years.

Bulk Sales Have Suffered

We have been exposed time and again to these advices and you can answer what you have done about it. Is it any wonder several ice cream manufacturers told me they felt sorry for me in trying to prepare this story, for I was going against the trend of the times and nothing much could be done about it. It is this type of philosophy that is retarding the development of bulk ice cream sales. Indeed we are happy that package ice cream sales have increased tremendously, and we don't want to change that picture—except for the better. But actually because of that extra emphasis that has been put on package sales, we have stressed one phase of our industry at the expense of another. Bulk ice cream sales have suffered. We have found they will not go along on their own momentum—the bulk business suffered because we let it.

BY H. R. SCHEID

*Fenn Bros., Inc.
Sioux Falls, South Dakota*

In the past (and this is going back quite a few years) we have been afraid to tell the dealer the actual facts of bulk ice cream. We created an air of mystery around it—to our own detriment. We did not tell the dealer what it would do and what it would not do for him in regard to his profits. We deliberately took advantage of a lack of dealer knowledge because we felt if he did know, we would perhaps lose volume. Because of this dealer ignorance he became suspicious—for the lack of knowledge is a dangerous thing. The dealers did become interested in bulk ice cream and what it would do for them. Much of this information was gained from competitors other than ice cream manufacturers—or by his own experience. And because much of this information was not factual, the dealer became skeptical and hard to deal with concerning bulk ice cream. A definite need arose for developing, helping and instructing our dealers in the various methods and ramifications in selling bulk ice cream.

The Soda Fountain

One of our major bulk outlets is the soda fountain. We must help that dealer improve his facilities by rearrangement if necessary, to make his soda fountain department more attractive—more inviting. To help him, carry on an educational program for operating the fountain profitably. The Paraffined Carton Research Council Survey showed soda fountains could be one of the most profitable departments and conversely one of the most unprofitable. We have a forceful and dynamic story to tell the dealer why that department is so necessary. The proper building of items and its techniques, a planned program of items by the month, special event days, with the appropriate advertising plus the fortitude to sell that program, must be accomplished. Much has been written and said by speakers on the mechanics of how to develop these activities. So I will not go into those details. I can't give you new methods or revolutionary ideas. All I can hope to do is arouse interest in using what we have. It amounts to this:

Do you believe in it? Do you want to do it badly?

(Continued on page 76)

DEAN MILK COMPANY LIKES NEW WHITE 3000 IN HEAVY CHICAGO TRAFFIC

... Reports F. J. Hart, Vice President,
Dean Milk Company, Chicago



"OUR NEW WHITE 3000 makes an outstanding ice cream delivery unit," F. J. Hart, vice president and general sales manager, Dean Milk Company, Chicago, Ill., says, "because it's built right for the work it has to do in our heavy Chicago traffic."

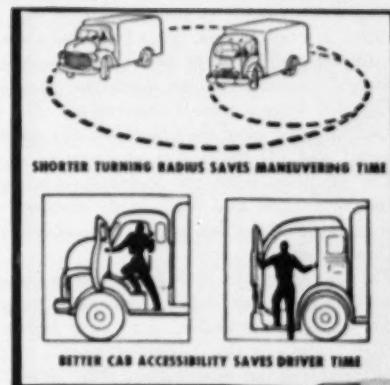
"The greater maneuverability and shorter turning radius help our drivers save time in traffic," he says, "and cut down on parking time. They take up less space on the streets and in the garage."

That's the report wherever the new White 3000 has been put into service in ice cream and milk delivery. Its functional design . . . its new weight dis-

tribution principle . . . its completely new approach to reducing delivery costs—these are all exclusive White 3000 advantages that make it tomorrow's truck today—a profitable investment for years to come.

It is completely useful—in every feature. The power-lift cab provides complete front-end accessibility in seconds! Its entirely new design saves time—saves space—saves delivery cost!

Your White Representative will be glad to show you the advantages of the new White 3000 as they apply to your exact needs.



THE WHITE MOTOR COMPANY
Cleveland 1, Ohio, U. S. A.

FOR MORE THAN 50 YEARS THE GREATEST NAME IN TRUCKS



Tips its cab to service

BY A. C. KUNKEL
Sales Mgr., Breyer Ice Cream Co.
Philadelphia, Pennsylvania



WHILE the gallon unit of ice cream had been discussed during the war as a post-war objective, we did not introduce it in any of our operations until September, 1945, when it made its appearance in our Harrisburg area. It has always been our custom on introducing a new feature to pick out one of our distributing branches as a testing area. Since Harrisburg was a "peddle" branch, the delivery men as well as the salesmen were thoroughly indoctrinated on the gallon package.

Complete records were maintained on: (1) the number of dealers who stocked the gallon can, (2) the number who repeated, and (3) the dealers who refused to stock them.

The reception from the beginning was excellent and continued to grow as a result of the salesmen and drivers concentrating on the dealers who were at first reluctant to stock the gallon.

The four months in 1945 in Harrisburg brought out the point that the urban dealers were more receptive to the gallon than the city dealers, due to the higher percentage of deep freezers in the country sections.

As a result of our experiences in Harrisburg, we decided during 1946 to extend the sale of gallon cans to the other distributing branches, with the exception of Washington, with the following sales results:

	% of Total Sales
Allentown, Pa.	8.4
Harrisburg, Pa.	9.4
Scranton, Pa.	7.4
Salisbury, Md.	4.2
Washington, D. C.	
Wildwood, N. J.	3.8

In 1947 we included Philadelphia and Washington, which completed the entire operation, with the following results:

	1947	1948
Metropolitan Philadelphia	3.2	5.0
Allentown, Pa.	7.9	8.4
Harrisburg, Pa.	9.6	8.9
Scranton, Pa.	5.8	6.0
Salisbury, Md.	8.5	10.5
Washington, D. C.	4.6	7.3
Wildwood, N. J.	3.5	4.6
Total Philadelphia Operations	4.42	5.93

Outstanding Results

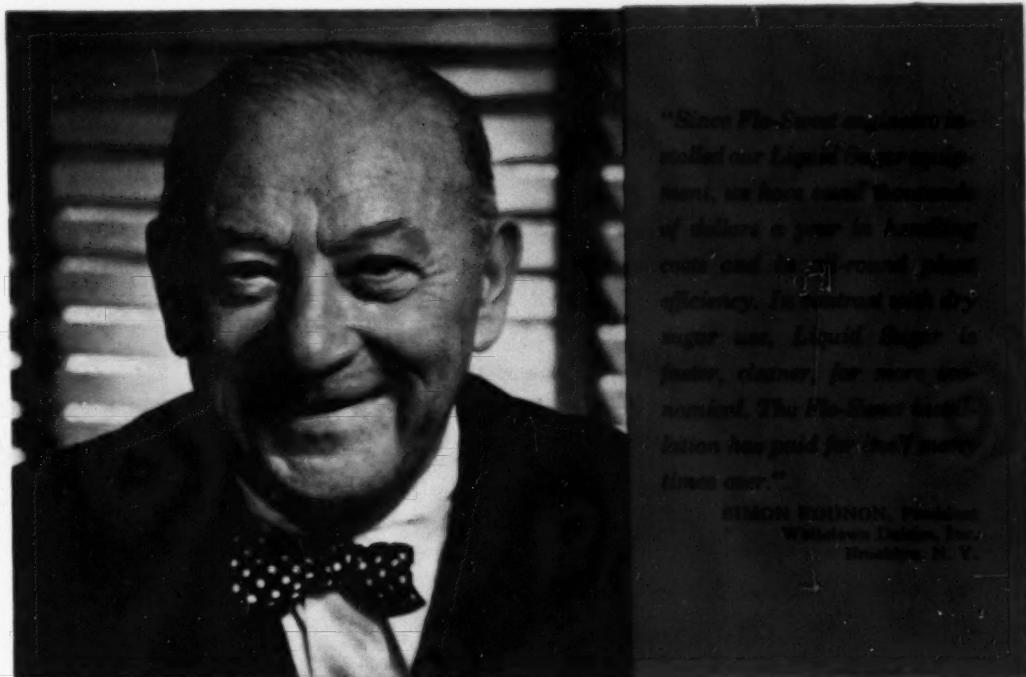
To meet continued consumer demand for a small unit, we brought out the half gallon in April of 1949, with outstanding results. Combined sales of gallons and half gallons increased in the month of April from 6.76 per cent of the previous year to 9 per cent; and, despite a decline of general sales, ended the year of 1949 with 9.3 per cent of total sales.

As of September 1, 1950, the gallon and half gallon sales represent 12.14 per cent of total sales.

So much for the statistics. Let's discuss the mechanics of selling half gallons. How is it done?

- (1) First and most important is determining the retail

(Continued on page 80)



"Since Flo-Sweet came to us and installed our Liquid Sugar plant, we have saved thousands of dollars a year in handling costs and in labor and plant efficiency. In contrast with dry sugar use, Liquid Sugar is faster, cleaner, far more economical. The Flo-Sweet liquid sugar installation has paid for itself many times over."

SIMON EDMON,
W.M. CO., INC.
Bronx, N.Y.

ICE CREAM MANUFACTURERS WHO USE *FLO-SWEET* SAVE \$\$\$\$ EVERY YEAR

Users' experiences prove that such important savings are typical whenever liquid sugar replaces dry sugar. The fact that three easy mechanical operations do the work of 10 back-breaking storage and handling operations is one quick indication of how Flo-Sweet cuts costs.

Users' experiences prove, too, that there's no substitute for—nothing "just as good" as Flo-Sweet experience, Flo-Sweet "know-how," Flo-Sweet service.

THESE ARE FACTS:

► Flo-Sweet made the first liquid sugar for bulk distribution 27 years ago.

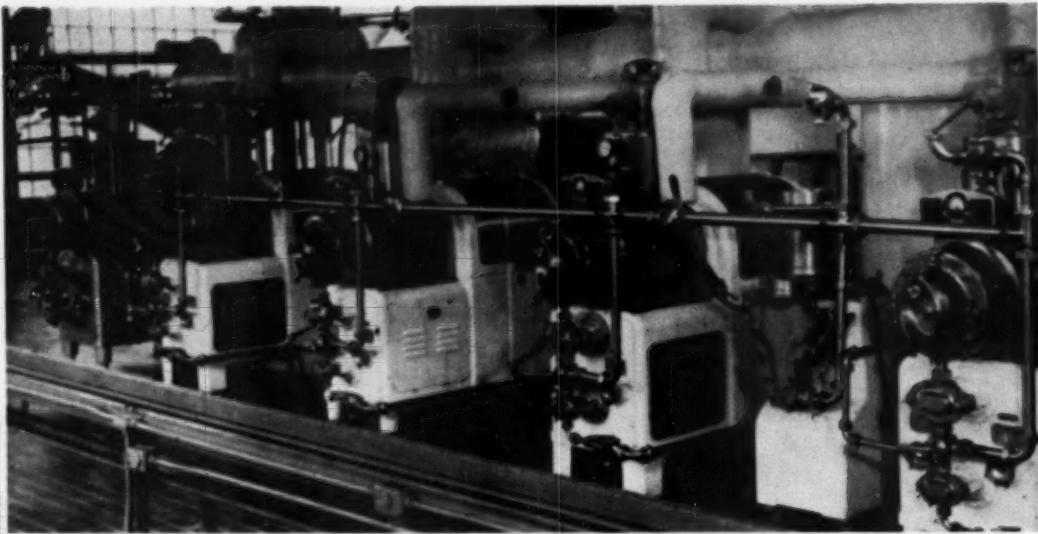
Therefore, when you get Flo-Sweet you get *more* plant assistance, product research and improvement, product control, and always-dependable service . . . AND THOSE ARE THE THINGS THAT SAVE YOU \$\$\$\$ EVERY YEAR



REFINED SYRUPS & SUGARS, INC.

Yonkers 1, New York

PIONEERS IN LIQUID SUGAR FOR SAVINGS, SANITATION AND SERVICE



REFRIGERATING EFFICIENCY

I AM going to discuss efficiency. As an engineer, I have been taught to determine the efficiency of machines and processes. We might define the term as the results divided by the effort and since we are talking about refrigeration systems, we might say that the efficiency is the tons of refrigeration capacity for each horsepower. Since you men have to pay the power bills to run your refrigeration plants, you should be very much interested if I can show you how to save 20 per cent by improving the efficiency of your plant. For example, if your compressors took 100 H.P. and your power cost $1\frac{1}{2}$ c per KWH, your bill would be about \$1.50 per hour and if we were to save 20 per cent, that would be 30c per hour. As business men you are no doubt keenly interested in all economies but when you pay a man around \$1.50 per hour, a 30c saving is not so important; so, perhaps, I should talk about something else.

I have made up my mind to discuss efficiency and that

is just what I am going to do but it will be about a different kind of efficiency.

If you had a servant who was always on hand when you needed him, who anticipated your every need and provided you with exactly what you wanted, you would probably consider him to be highly efficient. You probably would not worry about how long and how hard he worked and you would not object to paying him more than the minimum wages.

It is an efficiency of this sort that I have in mind. I am thinking of a plant that will provide adequate refrigeration at the required temperature when needed and to every department in your plant. I would put an end to the freezer men and the novelty man and the storage man blaming one another for hogging all the refrigeration. If you can eliminate delays at the freezers, if you can eliminate slow freezing of novelties while a costly crew sits idle or works far below its normal rate and if you can avoid spoilage of expensive materials or inferior quality of product caused by failure to maintain correct temperatures, you will probably consider the first cost of your refrigeration plant as money well spent and you are not likely to worry greatly about the power consumption of your compressors.

Not that such a plant is necessarily more expensive; it may be the right kind rather than more equipment that

(Continued on page 84)

BY LEON BUEHLER
Creamery Package Manufacturing Co.
Chicago, Illinois

profits grow when you sell . . .

MACAROON ICE CREAM ROLLS

and . . .



Wire mold frames are designed to be used with inexpensive liners and discs. Production costs are cut . . . profits increased.

* Patent Pending

Use the WIRE MOLD METHOD to Produce the Quart and New 18 oz. Size

It's easy—it's quick—it's inexpensive. The method is simple and speedy and the supplies you need cost so little.

What's more, this different and delicious ice cream treat really sells. Just picture its appeal . . . your delicious ice cream covered with luscious, crunchy Macaroon Krumbles. It's perfect dessert for family meals or refreshment for parties. Hostesses and mothers will be quick to recognize the ease and speed with which they can serve this special treat.

All you need to produce this attractive, profitable item is the wire frame and the inexpensive paper liners and discs pictured.

The WIRE MOLDS are now available in two sizes — one to serve 4 or 5 portions, the other to serve 7 or 9.

We will supply everything needed to produce this profitmaking ice cream roll . . . wire frames, liners, discs, window cartons, delicious macaroon crunch and colorful posters to aid your sales. Let us show you how this method of molding ice cream can bring you greater profits.

Write Today For Complete Information

LUDWIG-LOCKHART CO.

318 North Third Street

Minneapolis 1, Minn.

BY PROFESSOR D. J. HANKINSON

*University of Massachusetts
Amherst, Massachusetts*

PRODUCTION COSTS

THE success of business depends upon profits. Profit is management's reward for risking invested capital.

If profit is to be forthcoming, a knowledge of costs is absolutely necessary. The very important field of cost accounting has been developed to provide business with this information. Accurate cost data permit management to maintain efficiency and to meet competition. Large firms maintain accounting departments, and even small firms may retain the part-time services of a professional accountant for the purpose of keeping cost records. Another reason for exact knowledge of the financial affairs of a business is to satisfy governmental agencies for tax purposes, with satisfactory evidence of activity. It is not difficult, therefore, to justify the importance of knowing costs.

Ice Cream Costs

The subject of cost accounting can be discussed fully only by a professional cost accountant. There are many records that must be kept. There are many decisions to be made in assigning costs to certain departments where services are shared by all departments. This is a specialized subject which will not be adequately covered in this discussion. We will concern ourselves more specifically with those matters which affect the cost of manufacturing ice cream and which are within the control of production men.

We will consider production costs as those costs directly connected with the manufacture of ice cream; for example, raw material, labor, supplies, power, refrigeration, fuel, water, maintenance and repairs. These costs vary with the quantity and quality of product manufactured.

We will not consider other "fixed" costs which are im-

portant in the conduct of business. Examples of fixed costs are building costs, including rental, equipment, depreciation, taxes, insurance, etc. These costs change but very little from one season to another regardless of the production volume. A share of many of these costs are rightly assigned to production but as a rule are not within the control of the production superintendent.

General Characteristics

With these general qualifications in mind we can proceed to more specific information. The ice cream business is highly seasonal with peak activity in summer months and little activity in winter months. This feature has its advantages in providing idle periods for vacations and preparation for the busy season. However, it has its disadvantages in that product cost data for any one month are not representative. When labor is busy painting walls and equipment instead of producing ice cream, the unit product costs are high. Hence for a fair estimation, cost data for a complete year should be considered.

Considering production costs, as defined earlier to include raw material, labor supplies, power, refrigeration, fuel, water, maintenance and repairs, we can analyze each of these cost factors separately.

Maintenance and repairs are variable items but in general are reflected in the care given equipment and the building. These matters are routine except for emergency breakdowns and it should be apparent to production men when such costs are greater than normal. Power, refrigeration, fuel and water costs are not so apparent. Unless reports are

(Continued on page 89)

Sof-Tee

NEW WHIPPED ICE MILK SENSATION!

*The Answer to Your Problem
of Supplying "Soft" Confections*

Wide-awake ice cream manufacturers know soft ice milk and similar custard confections are *here to stay!* Sof-Tee Machine now reduces hard ice milk in less than 10 seconds to a smooth, whipped semi-hard product. Fresh strawberries, bananas, corn flakes, candy chips, or any flavor desired added to the ice milk makes a new TASTE THRILL never before experienced.



Sof-Tee Triples Dealer Volume Skyrockets Your Gallonage

Dealers everywhere are inquiring about Sof-Tee. It's a cinch to increase gallonage with present accounts and get *new ones* too, when you show them Sof-Tee. No franchise, no royalties, no tie-ups on mix ingredients . . . you handle Sof-Tee Machines on a regular distributor basis with a fair profit markup. Sells to retailer for \$159.50 plus excise tax, f.o.b. Los Angeles. Write today for literature and further information.



Sof-Tee
CORPORATION

SOF-TEE CREATES OVERRUN

Make this positive overrun test! Put 4 oz. of ice cold homogenized milk in chilled Canister. Whip milk until "pin-point" hole shows in milk vortex. Remove Canister and turn upside down. Milk has swelled to over 4 times original volume, has whipped consistency and will *not* pour.



6250 Wilshire Blvd. • Los Angeles 48, California
Phone: WEBster 1-1091



A TIME AND MOTION SANITATION STUDY

THE cleaning operation in the dairy industry is of very great importance both from a quality and labor cost standpoint. In too many cases it has been accepted as a necessary evil and relatively little effort has been made to improve it.

In most dairy plants, the cleaning operation has not changed a great deal in the last twenty-five years. There has been a great deal of improvement in the various detergents, but in general, the methods have remained much the same. The reaction of an efficiency minded layman is that the cleaning operation in dairy plants is primitive.

In general, plant workers do not consider the cleanup job as very desirable. Their typical comments are, "It is a woman's work," "I get too wet," "I would rather operate the equipment." There is some basis for this attitude from a health standpoint as the worker is exposed to considerable moisture which can give rise to colds, rheumatism, etc. The job is usually given the lowest pay scale, and the poorest men assigned to the job.

BY WILLIAM E. SHIFFERMILLER

*Michigan State College
East Lansing, Michigan*

The cleaning operation is of greater importance than labor cost and quality values on the basis of the psychological effect on new employees who as their first job are given this task. The dairy industry will never know how many good men have left the industry due to wrong impressions given by the first few days on the cleanup job.

In many plants, no definite cleaning method exists, and the worker is handed a bucket and a brush and told to clean up the equipment.

Considerable Progress

The manpower shortages, of the late World War and post war period, gave some impetus to investigations on the methods of cleaning, and some companies have made considerable progress. There is a large amount of research being undertaken in this field at the present time, and more of this work is contemplated.

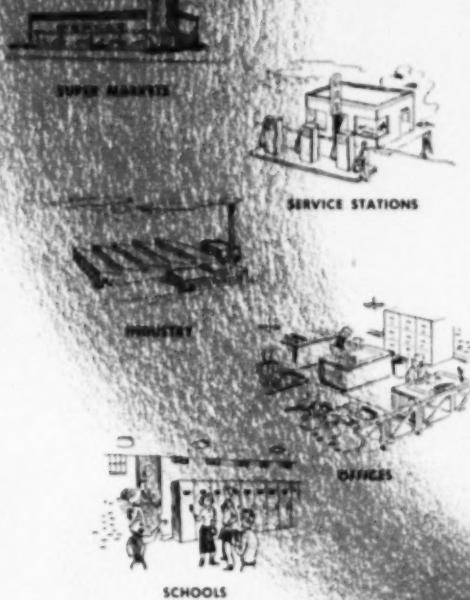
In order to get a more complete picture of the operations involved with the cleaning operation, a time and motion study was made on the cleaning operation in three commercial fluid milk plants.

Time and motion study is the analysis of the methods, materials, and of the tools and equipment used or to be

(Continued on page 79)

Here's a Vast New Source OF OUTLETS, SALES & PROFITS!

Now, you can profit from the impulse characteristics of ice cream through automatic merchandising. The Vendo **Dairy-Vend** ice cream vendor is your answer! In factories, offices, super markets, service stations and schools . . . where ice cream bars are available on the spot . . . the **Dairy-Vend** is a proved profit maker.



This smart, modern beauty . . . packed with selling power . . . will create availability . . . point of purchase sales appeal . . . buying action . . . new buying habits . . . sampling . . . brand preference . . . new advertising exposure.

Take This First Step NOW!

If you are an ice cream bar manufacturer you will want a free copy of "Automatic Merchandising—the answer to increased sales and profits". Tear out coupon below and mail today!

THE VENDO COMPANY
7400 East 12th Street
Kansas City 3, Missouri

ICF

Please send me a free copy of "Automatic Merchandising—the answer to increased sales and profits."

Name _____
Company _____
Street _____
City _____ State _____

Vendo®

The Name to Remember in Automatic Merchandising



FIRST ROW: Robert O. Division, King, Marlin and Ross Kiell of Kenco Co.; Kingsley Kempp of Ralva Corp. with C. V. Christiansen and R. W. Morell of Bowman Dairy Co.

SECOND ROW: H. W. Kirk, Glenn O'Toole, Charles Nelson, A. J. Lewiske, all of Nelson Manufacturing Co.; Hy Badier, Mr. and Mrs. Jerry Jermak, and Mr. and Mrs. Bob Springer of Le Roy Foods.

THIRD ROW: Charles Wolensak, Ben Al-

heimer, Paul Webber and Walter Martin of Milprint; Percy Storer, Harry Ness, George Reid and H. A. Ackermann of Food Materials Corp.

FOURTH ROW: Randy Merritt, R. K. Merritt and Associates; Dewart F. Shawell and F. N. Steiner of Mulholland-Harper Co.; Joe Merten, Walter Wachowits, Sr., Walter Wachowits, Jr., and Jerry T. Atkinson at the Alley Products booth.

FIFTH ROW: Robert Stevensia, J. W. Koper,

E. S. Jeitner, P. J. Gallino and Robert Lyon of the Mathieson Chemical Corp.; E. J. Connolly, W. E. Lambie and W. E. Lambie, Jr. of Southern Packing Co.

SIXTH ROW: Jack Ernst, Jr., Mr. and Mrs. John Lonergan, Jack Ernst, A. Thibault, and M. H. Gwynn at the Refrigeration Corp. of America, Division of Lonergan Manufacturing Co. booth; Ray Kroc, Miss M. Schultz, W. R. Jamison and Hal Johnson of Prince Castle Sales.



FIRST ROW: Grant Loeck, Hal F. Beumer, T. S. McDonald, Philip Fritz and Ernest W. Shroyer of Grand Rapids Cabinet Co.; R. J. Massey and C. J. Nielsen of Massey's, Inc.

SECOND ROW: W. G. Warwick and N. C. Steierhem of Eskimo Pie Corp.; Roy M. Warren, Philip A. Burke and R. H. Maurer of J. Hungerford Smith; A. Leone, Ray Leone, Gerard Leone and John J. Morey of Wood & Selick.

THIRD ROW: Mr. and Mrs. E. N. Flagan, E. N. Flagan Ice Cream Co. with Ray Matzenau of

Schnabel Co.; Harry Silverton, R. Clark and Ira Brightman at the Max Amo-H. Baron booth; Arthur Bartz of Chicago Stainless Equipment and Alex Freeman of ICE CREAM FIELD.

FOURTH ROW: At the S. H. Mahoney Extract Co. booth are Frank Scheu, D. C. Mulligan, S. H. Mahoney, Paul Scoggins of Scoggins Ice Cream Co., Dan Frye, and Bill Johnson; J. G. Kuebler, H. A. Wedix and F. J. Tyler of National Pectin Products.

FIFTH ROW: Dan Cohen and Bob Moenich of

R. G. Moenich and Co.; Harold Rodgers of Spring Hill Farms; George Harrison and David Singer of Harrison's Co. with E. E. Newton of Creameries of America; G. P. Gundlach with C. W. Esmond of G. P. Gundlach and Co.

SIXTH ROW: Joseph F. Grubbel, Fairview Dairies, Barr Canons of Schnabel Co., Roy C. Moersch, Fairview, and William DeKoven of Schnabel; Z. Kubvach, Andrew de Blough, Frank Stafford, M. Landers, Al Blanding and Ben Libowitz, all of America's Blodds Corp.



FIRST ROW: Edward M. Fritz and Edward G. Fritz of Grand Rapids Cabinet Co.; R. A. McCluskey, Emery Thompson Machine and Supply Co.; Elmer G. Derby, Tom G. Churchill and H. W. Levesque of Walter Baker Chocolate Co.

SECOND ROW: Mr. and Mrs. John Stevenson of Associated Nurseries Co.; Charles Keaveny of R. G. Muench, and Charles Keaveny, Jr., of Krim-Koi; Jack E. Horner, Ed E. Horner and F. J. Morris at the Horner Sales Corp. booth.

THIRD ROW: Ray Peacock of E. F. Drew, Bazel L. Cummings, B. L. Cummings Co. and A.

Radding of E. F. Drew, Robert Rosley, Paul Anderson and Ralph Karnett of the King Co.; E. R. Sanderman and J. F. Kreppel of Lily-Tulip Corp.

FOURTH ROW: Howard Janover and Lew Schill of S. Gumpert Co.; George Beers of Robbins & Buckley; Mr. and Mrs. William Fink of Fink's Ice Cream Co.; George Beers, Jr., and Cliff Arnold of Robbins & Buckley; Rubin Raskin of Dixie Products and Franklin Body Companies.

FIFTH ROW: At the Dixie Cap Co. booth are Sam Sawyer, George A. Smith of Dixie Dairy

Products, Henry Westphal, and James W. King; Al Levin of Jordan Refrigerator Co.; Philip D. Salter of Gold Bond Ice Cream Co.; Phil Phillips of Maryland Baking Co. and W. A. Gifford of Progressive Dairy Co.

SIXTH ROW: Valan Eighosen of the Vitafreez Corp. standing besides the firm's new Model D continuous dipping line (left); Irene Gillette of Ambrosia Chocolate Co.; E. H. Pilmore, Don Kellogg, and Ralph Abrams of France E. Kellogg Co.



FIRST ROW: Mr. and Mrs. George Anderson of the King Co.; Fred Hollweg of Thomas W. Dunn Co.; Bernard Jaffe and E. H. Bokelkamp of Illinois Baking Corp.; Malcolm T. Bard of Chrysler Auttemp Division.

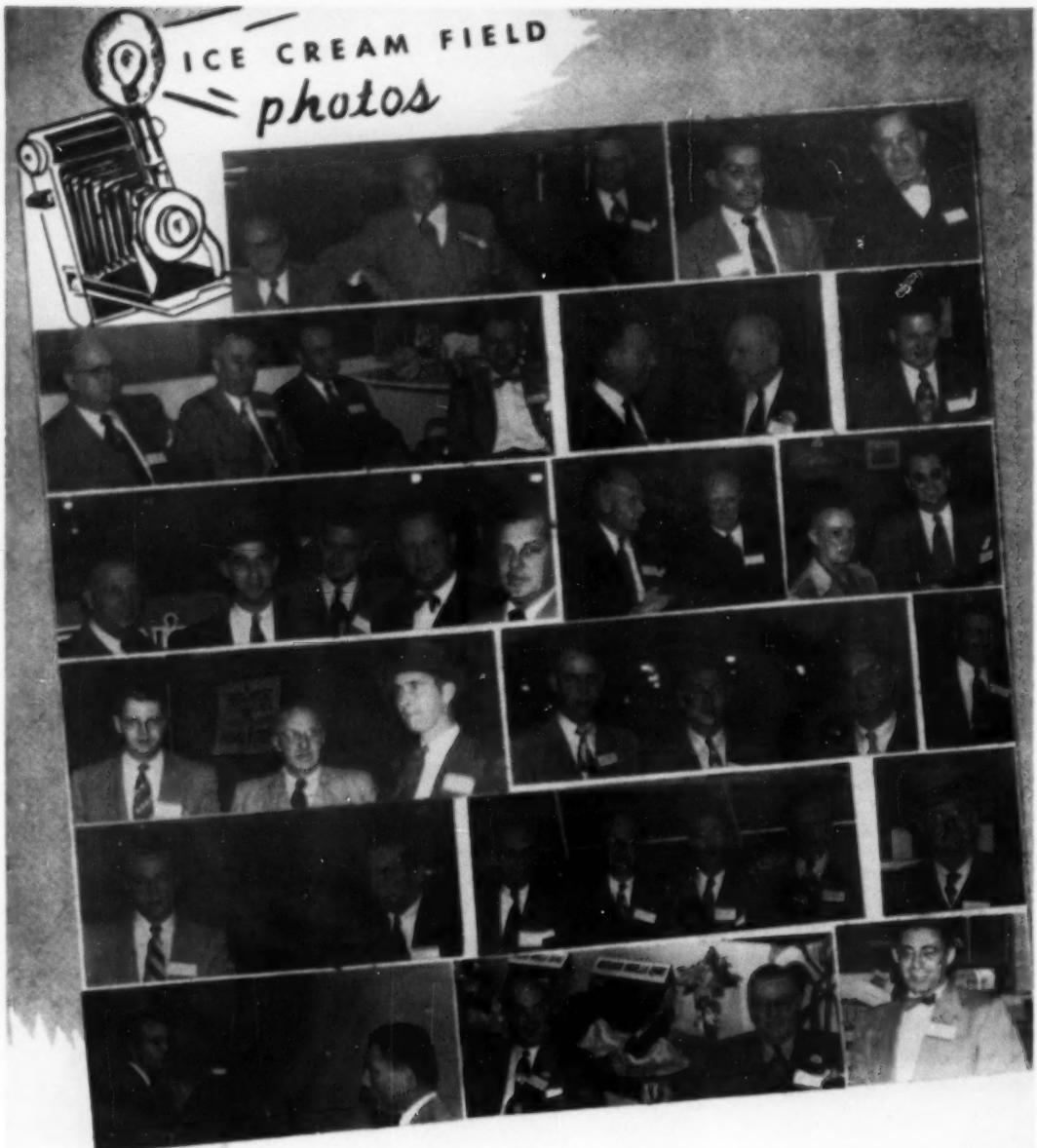
SECOND ROW: Ralph Anderson of Anderson Bros. Manufacturing Co.; Stubby Parker of Drumstick, Inc., and Swan Anderson of Anderson Bros.; Joseph Hennion, Charles Naas and Bob Campbell of Tyler Fixture Co.; Mr. and Mrs. Duane Poultier of Germantown Manufacturing Co.

THIRD ROW: Manny Burke of Robert M. Green & Sons; Isaac Tenenbaum and Mr. and Mrs. Marvin Weisberg of Phenix Soda Fountain; J. Andrews of Breyer Ice Cream, Ted E. Hoye of Savage Arms, George Lamey of Breyer's.

FOURTH ROW: Robert Shimholz and Oscar Valentine of Beck Vanilla Products, Sam Modlin, Modlin Dairy, Howard Beck of Rock Vanilla, J. V. Goeken and Leroy Goeken, Noll Baking and Ice Cream Co.; H. E. Dinsmoor, Jr., Stanley A. Byram, H. E. Dinsmoor, Sr., and H. A. Kelleher, all of Virginia Dare Extract Co.

FIFTH ROW: Maurice Yohai of S&S Cone Co., Wondrow Casper of Ogden Dairies and Morris Yohai of S&S Cone; W. G. Manschet and R. J. Doyle of Robert A. Johnston Co.; German Prince of Alexandria Dairy Products and Jack Macdonald of Jiffy Manufacturing Co.

SIXTH ROW: Paul K. Gitter, Larry Grossman and Robert Asens, all of Gitter Manufacturing Co. at the firm's stainless steel ice cream mold washer; R. M. Wolfe of Jersey Creamery and Stanley Knight, Jr. of Stanley Knight Soda Fountain Corp.; Julius Ellman and Harold Hoffman of Extras Co.



FIRST ROW: Arthur Vogel, Hugo Pulver, and C. D. Riddison of H. Kohnstamm & Co.; George (Bud) Doules, Jr., and George Doules of Eastern Paper & Box Co.

*
SECOND ROW: O. W. Badger, C. E. Davis, Paul Thorsen and John Morse of Froue & Jenkins; Ed Faris of Milwaukee Engineering and Specialty Co. and T. A. Doherty of Cleveland Fruit Juicer Co.; Michael Yelen of Acorn Sheet Metal Manufacturing Co.

THIRD ROW: At the Drumstick, Inc. booth are J. C. Parker, H. Paul of Garvin's Dairy, Frank Dark, Paul Mooney and Bruce Parker; G. F. Meyer and W. F. Meyer, Warner Jenkins Manufacturing Co.; B. Hall of Borden's and W. T. Boo of Hackney Bros. Body Co.

FOURTH ROW: Robert Wildman and E. C. Roschman of General Equipment Sales with W. C. Patten of Bacon Creamery; Jack Hutchinson, Robert Blommer and William Robson of Blommer

Boss; John E. Matz of Chicago Stainless Equipment Corp.

FIFTH ROW: Lawrence F. Meyer, Jr., and Lawrence F. Meyer, Sr., of Meyer Body Co.; Charles Grube, John Sodall, Bob Kenny and George Reid at the Wilbur-Suchard booth; Pat Hawkins of Nash-Kelvairne.

SIXTH ROW: Tom Hackney (on the right) at the Hackney Bros. Body Co. exhibit; Curtis J. Peter and Conrad Langfield of Northville Laboratories; William Rubin of Empire Biscuits Division.



FIRST ROW: N. Erik Almén of Freezer Box Division; Anatole Yachet, Ridgway Kennedy, Jr., and William E. Reichert of Abbotts Dairy; George Hoffman of Ex-Cell-O Corp.; Pure Pak Division; Walter B. Moler of Moler's Belmont Dairy, and F. W. Lenzhacker of Ex-Cell-O.

SECOND ROW: L. N. Lucas of Baxian-Blessing; Eli Rosenbaum and Walter Rossman of David Michael & Co.; Jim Lockhart of Ludwig Lockhart Co.; (center) Robert of Anderson Bros., M. V. Gorkin of Lynch Corp., and Harvey Robbins, Paraffined Carbons Research Council.

THIRD ROW: Claude Reed, President, White-White Co.; J. T. Kirkpatrick of Sutherland Paper Co.; Adolph Marx, Joseph Glaubman and Harry Hyman at the American Food Laboratories booth; R. O. Devision and J. J. Sullivan of Kelco with Joseph McDonald, McDonald's Ice Cream.

FOURTH ROW: Carl Bohnsdorff and Gordon Hines of Arctic Vendor Sales Co.; H. S. Robinson of Ace Cabinet; Joseph Sury of Alpha Aromatics; Roy A. Covington and W. V. Brookshires of Brookshire's Ice Cream Co., and Milton Ammbinder of Alpha.

FIFTH ROW: C. E. Thompson and R. R. Nemeth of Sealright Co. with S. J. Whitehead, Canadian Sealright; Al Rose and Bernard Hansen of Schaefer, Inc.; Jack W. Semakar and Eugene Weiller of the Weiller Co.

SIXTH ROW: Arthur C. Beall and William B. Pitt, Jr. of C. M. Pitt & Sons; Earl Ward and Worth Wood of Frost and Jenks; Alan E. Cope, Omaha, and J. L. Delphus at the Sealright booth; Dave Snow and Mr. and Mrs. Henry B. Powell of Freezing Equipment Sales.



FIRST ROW: Bernard Out and M. L. Finnengough of Liquid Carbonic Corp.; at the Fulton Engineering booth—Bernard Kindman, Mrs. Joseph Kindman; John Duffey; Joseph Kindman, Mrs. Bernard Kindman, and C. M. Vaden, Vaden Engineering.

SECOND ROW: R. C. Russell, E. W. Crandell, Claude B. Wells, G. H. Smart, C. P. Gass and John C. Plaster, all of Whitton Products Division, the Borden Co.; William Kellogg, Jud Browne and Jerry Driscoll of Container Corp. of America.

THIRD ROW: R. E. Dunn of Chapman Dairy, Walter Rossman of David Michael & Co.; K. W. Stewart of Chapman, Mrs. Robert Rosenbaum, and Mrs. R. E. Dunn; Murray Sanders and Jack Sanders of Grace Fruit, and Harry Brown and Gerald Iannelli of Borden's Frozen Foods.

FOURTH ROW: Mr. and Mrs. Stan Overland and Mr. and Mrs. Dan Overland of Le Roy Foods; Charles Q. Sherman and Bernard Sherman of Phenix Soda Fountains; Jake Martin and Richard S. McQuay of Velvet Freeze Ice Cream.

FIFTH ROW: William Harris, Eugene Martinez and Fred Boldry at the William Melish Harris booth; Andrew J. Torter, C. J. Beringer and E. M. Morris of H. Kohnstamm & Co.; R. E. MacFarland and H. H. Mulholland of the Mulholland Co.

SIXTH ROW: Jack Miller, Harding Smith, George Waters, Diana Paulterer, Frank Paulterer and Jerry Smith, all of Germantown Manufacturing Co.; W. C. Ryan and Sam Baily of Barry & Baily.



FIRST ROW: At the Zeeoni Booth are Mrs. M. A. Buscherer, S. L. Kelly and C. E. Buscherer; M. L. Banks, L. W. Barber and Al Abramson of Maryland Baking.

SECOND ROW: At the Stein-Hall & Co. booth are Herbert Goldfrank, Daniel Lipman, Bob Becker, Ed Hensley, J. C. Marquardt of the New York State Department of Agriculture and Sanford Werbin; William Kopelke and Lou Carliner of Better Ice Cream with Jack Burlington of Vendo.

THIRD ROW: George H. Finley, Howard Franklin and James J. Carey of Blonmore Brothers; at the Reco Products booth are H. D. Graves, W. Voll, Max Myers, Preston Clark and Tom Daley.

FOURTH ROW: W. A. Hurst, L. L. Little and S. Knadler of E. F. Drew & Co.; Mrs. C. Roulston, Aristocrat Dairies, Mrs. T. P. Bodner and Mr. & Mrs. John B. Bennett of Philadelphia Dairies.

FIFTH ROW: L. A. Perlewig, H. R. Stickel and J. B. Dillon of White Motor Co.; Harry D. Moore and Helen Wunsch of Metal Sponge Sales and Russell Carter and John Kopek of Gray & Rogers.

SIXTH ROW: Fred M. Simon, Jr., Fred M. Simon, Sr., and Richard K. Simon of the Weiller Co.; Mr. & Mrs. Jay Henry of Thomas W. Dunn Co., with Lou Corning (center) of Buttercup Ice Cream; Joe Lowe of the Joe Lowe Corp.

LUBRICATION OILS

CONTINUOUS operation of an ice cream plant at full capacity may depend almost entirely on the type of oil used for lubrication in the compressors. Oil is a poor heat transfer medium. When oil from the compressors gets into the plant's refrigeration system, it collects on the heat transfer surface of evaporators and condensers, resulting in reduced heat transfer, reduced evaporator capacity, lower back pressure, higher head pressure, reduced refrigeration capacity, and an increased power cost per ton of refrigeration. The most serious of these is the decrease in operating capacity of the plant, plus a possible effect on the quality of the product due to inability to freeze and harden the ice cream properly, or the tendency of plant personnel to relax quality standards in an attempt to maintain capacity.

All ammonia refrigeration systems contain some oil. In this regard they differ only in the amount and the nature of that oil. The amount of oil that will find its way into the system can be kept at a minimum by proper maintenance and operation of refrigeration equipment, including the use of an oil with the right viscosity and other required characteristics for complete lubrication of that equipment. Some of the common causes of an excessive amount of oil in ammonia refrigeration systems are:

1. *High Discharge Temperature in Compressor.* Charts

in refrigeration handbooks which give the gas discharge temperatures under various operating conditions show that a single stage compressor operating at zero pounds back pressure and 175 lb. head, should have a theoretical gas discharge temperature of 312 deg. The book further tells us that under practical operating conditions, the actual temperature of the gas discharged by the compressor should not exceed the temperature shown in the chart by more than 20 or 30 degrees. This additional temperature above that of ideal compression comes from superheat in the returning gas, plus any heat that might be the result of such factors as leakage of compressed gases around piston rings or through the discharge valve, which produces an action similar to churning and causes a rise in temperature. Within the limits of good operating practice, the discharge temperature of the gas under these conditions would be somewhere between 332 and 342 deg. F. Raising the head pressure from 175# to 200# would result in an increase of 20 deg., with the actual discharge temperature under these conditions running as high as 350 deg. Going from zero pounds suction pressure to 5 inches of vacuum would also increase the discharge temperature another 20 deg. It is quite evident that gas discharge temperatures of 350 to 400 deg. in the compressor are not unusual and these temperatures are over the minimum flash point of many good compressor oils. High discharge temperatures cause vaporization and actual breakdown of some of the oil, with microscopic globules of vaporized oil too small to be removed by ordinary oil traps going into the system. That there is an actual breakdown of the oil due to these high temperatures is quite evident from the carbon deposits that are found on the compressor cylinders when machines are taken down

(Continued on page 95)

BY E. H. FORSTER
*Cherry-Burrell Corporation
Chicago, Illinois*



NARCM PERSONALITIES:

FIRST ROW: Arthur Jowett of Miller Dairy Farms; Lloyd Greene of Bard's; Mr. & Mrs. Harry Burt of Burt's Good Humor and V. A. Berghehofer of Forest Milk; Howard B. Grant of ICE CREAM FIELD.

SECOND ROW: Bob Eisdale of Hudson Manufacturing; C. M. Klapp of Klapp Creamery; E. J. Tupper and Frank A. Root of Topper's Dairy; and Eddie Mariano and Marilyn Boring, second from right; Ed McCormick of S. H. Mariano; Harry Hyman and Murph Hyman of American Food Laboratories with Harry Herndon, center, of the Charles A. Peterson Co.

THIRD ROW: Ted Jamison of Interstate Creamery; Jack Macdonald and Dorey McGuire of Jiffy Manufacturing; Roy C. Moersch and Jim Gravel of Fairview Dairy; H. J. Muldoon of Bemis Doan Ice Cream Co.

FOURTH ROW: Cedric Smith of B. Young & Co.; Howard Grant of ICE CREAM FIELD and Paul Thiboutot of Four Loko Jenks; Fred & Mrs. Marvin Freilach and Louis Freilach of Freilach Ice Cream; rear, Harold Courneva; Wayne G. Harman and Phil B. Hanson of Whirls-Whips; Grant Lorch and Ed Fritz of Grand Rapids Cabinet.

FIFTH ROW: Mr. & Mrs. Hal Hoisalmen of Rochester Dairy; Mr. & Mrs. Bill Roskam of David Michael & Co., and Mr. & Mrs. Rad Hibben; Jack Kaufman, Robert Hillson, Harold C. Nease and Robert Wright, all of Hillson Nut Co.

SIXTH ROW: At the DISA Show are Mr. & Mrs. Max Goldfarb of Illinois Baking; Nelson Banks of Maeda Ice Cream; G. G. Balmer and Frank Caster of Batch Flavor Co. and W. E. Elington of Maeda Ice Cream; Max Fixel, Irving Workman and Morris Workman of Worksman Cycle.

BY DR. H. C. OLSON

Oklahoma A. & M. College
Stillwater, Oklahoma

PREPARING CREAM FOR FROZEN STORAGE

ICE CREAM makers are well aware of the economy and convenience of putting cream into frozen storage during the period of flush production for use during the winter months when production is at a low ebb. Frozen storage of cream is a big business today, involving millions of pounds of costly butterfat. Unfortunately, considerable losses are incurred each year because the development of off flavors during storage results in lower quality ice cream made from the stored cream or in practically total loss of the stored cream in instances in which extremely objectionable defects develop.

There are many factors affecting the keeping quality of cream during frozen storage and numerous investigators have studied these various factors in attempts to discover the reasons why defects develop and to develop methods for enhancing the keeping quality of stored cream. The objectives of the work herein reported were to determine the influences of the serum solid content, pasteurization exposures and added ascorbic acid on the keeping quality of cream, with and without copper added, during frozen storage for nine months.

Most of the cream used in the experimental work herein reported was obtained from the dairy plant at Oklahoma A. & M. College while some of it was obtained from a local dairy. All of the cream was sweet and none of it was more than two days old. The cream was standardized to 47 per cent fat, divided into three lots and treated as follows:

LOT A—Standardized with skim milk to approximately 40 per cent fat.

LOT B—Standardized to approximately 40 per cent fat and 20 per cent serum solids by adding non-fat dried milk solids.

LOT C—Standardized to 15 per cent fat with skim milk and then condensed in a vacuum pan to approximately 40 per cent fat and 20 per cent serum solids.

Each of the above lots was divided and half of each was pasteurized at 180° F. for five minutes and the other half at 145° F. for thirty minutes. After pasteurization and cooling, the lots were again divided into two portions and one-half parts per million of copper, in the form of an

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aqueous solution of copper sulfate, was added to one portion. Each of these portions was divided into three smaller portions; to one of these nothing was added, while ascorbic acid in aqueous solution in concentrations of 50 ppm and 100 ppm was added, respectively, to the other two.

The above procedure resulted in the division of each original lot of cream into thirty-six samples. These samples were placed in one-half pint bottles, stored in an ice cream hardening room, maintained at 0° to 10° F., and examined for flavor criticisms after three, six and nine months of storage. Determinations were also made for titratable acidity, fat content, serum solids content and destruction of the fat emulsion or degree of oiling off.

Results

Data were obtained on the keeping quality during nine months of storage of six lots of cream, each divided into thirty-six samples which were subjected to different treatments. These data show the influence on the keeping quality and destruction of the fat emulsion of cream, with and without copper added, of the various treatments which involved variations in the serum solids content, temperature of pasteurization, and the addition of ascorbic acid. Time and space do not permit a detailed presentation of the data obtained because of the large number of observations, but the results are summarized in the following paragraphs.

Flavor Deterioration

Three variations in the serum solids content were used. One was normal cream with about 40 per cent butterfat and 5 per cent serum solids. A second lot had non-fat dried milk solids added to give a fat content of about 40 per cent and a serum solids content of about 20 per cent. The third lot of cream was standardized to 15 per cent fat and then condensed to give a fat content of about 44 per cent and a serum solids content of about 21 per cent.

The data obtained indicate that the condensed cream kept much better than the untreated cream or the cream to which non-fat dried milk solids had been added. This difference in keeping quality was especially noticeable in the samples that had added copper. The cream with the non-fat dried milk solids added possessed rather poor keeping quality, primarily because of the development of a flavor defect like that of stale milk powder. The non-fat dried milk solids used in these experiments was ordinary commercial grade of spray dried solids of unknown age, but it appeared to be of good quality. It is possible that if higher quality, non-fat dried milk solids had been used, the keeping quality might have been much better. The untreated cream with no copper added kept fairly well, but with copper added it deteriorated rather rapidly. This observation emphasizes the well known fact that cream must be low in copper content if flavor deterioration during storage is to be minimized.

Heat Treatment

In the cream with no copper added, pasteurization at 180° F. for five minutes improved the keeping quality as compared to the cream pasteurized at 145° F. for thirty minutes. The favorable influence of the high temperature

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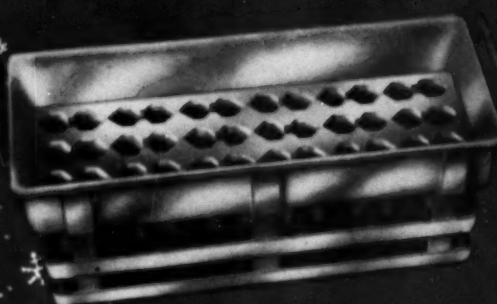
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of pasteurization was evident in the untreated cream and in the condensed cream, while in the cream with non-fat dried milk solids added, the temperature of pasteurization seemed to have little influence on the rate of deterioration. In the cream with copper added, the high temperature of pasteurization had only a slight influence in improving the keeping quality and there was rather rapid deterioration of flavor in all the samples with copper added.

Addition of Ascorbic Acid

The addition of 50 or 100 ppm of ascorbic acid in the form of an aqueous solution appeared to accelerate the development of off flavors during storage of the cream for nine months. In the cream with copper added the ascorbic acid seemed to be especially active in accelerating the deterioration. It should be observed, however, that in cream pasteurized at 180° F. and with copper added the addition of ascorbic acid aided materially in decreasing the rate of development of off flavors. It should also be noted that the samples of cream with 100 ppm of added ascorbic acid kept better than the cream with only 50 ppm, which suggests that probably the addition of larger amounts of ascorbic acid would have been effective in preventing the development of off flavors.

The observation on flavor deterioration showed that cream with the best keeping quality after nine months of storage was that with no copper added, pasteurized at 180° F. for five minutes, condensed to 40 per cent butterfat and 20 per cent serum solids and with 100 ppm ascorbic acid added. Of the six lots of this cream after nine months of storage, one had a very light oxidized flavor and one had a slight stale flavor, while the remaining four lots had no flavor defects and could be used in making high quality ice cream.

Destruction of Fat Emulsion

Although the observations reported herein are concerned largely with flavor deterioration, observations were also on the influence of the various treatments on the destruction of the fat emulsion or the degree of oiling off when the cream was thawed. The Webb and Hall method was used to determine the stability of the fat emulsion. The data indicate that the cream in which non-fat dried milk solids had been added showed the best fat stabilization, while there was so significant difference between the untreated cream and the condensed cream. In the untreated cream the oiling off was greater in the lots pasteurized at 180° F. than in those pasteurized at 145° F.; however, in the lots of cream in which the serum solids content was increased to approximately 20 per cent by the addition of non-fat dried milk solids or by condensing there was significantly greater fat stability in the samples pasteurized at 180° F. than in those pasteurized at the lower temperatures.

It should be pointed out that the method used for determining the amount of oiling off was a rather severe test and therefore, considerable destruction of the fat emulsion was apparent in all of the cream regardless of the serum solids content. In some other work conducted in our lab-

oratories involving larger quantities of cream which were used in making ice cream it was found that there was very little oiling off during pasteurization of the ice cream mix when the frozen cream used contained about 20 per cent serum solids, while there was considerable oiling off with cream of normal solids content.

Discussion and Conclusions

The great influence of metal contamination of cream intended for cold storage cannot be over-emphasized. When the work herein reported was initiated, it was hoped that some combination of the various treatments employed would prove effective in preventing flavor deterioration in cream during frozen storage, even in the presence of copper; however, it was found that considerable deterioration occurred in all samples with copper added. The treatment that was most effective in delaying development of off flavors in copper contaminated cream was that of condensing the cream to about 40 per cent fat and 20 per cent serum solids. Cream treated in this manner showed less deterioration in general than untreated cream or cream with non-fat dried milk solids added to increase the serum solids.

Pasteurization at high temperatures prior to storage destroys certain of the enzymes normally present in cream which may promote deterioration. The cooked flavor incident to pasteurization at a high temperature generally disappears during storage and therefore is not objectionable. Also, several investigators have shown that there is little likelihood of the development of oxidized or stale flavors as long as a cooked flavor is present because the factors responsible for the cooked flavor are reducing substances which counteract oxidation.

The results obtained with ascorbic acid were rather disappointing because this material has proven to be very effective in preventing oxidized flavor in milk. The amounts used in the cream were considerably in excess of the amount found to be effective for milk and yet our results showed that the ascorbic acid seemed to accelerate the oxidation in many instances in which copper was present in the cream. Without copper added, however, condensed cream pasteurized at 180° F. for five minutes and with 100 ppm ascorbic acid added kept very well during nine months storage while the same cream with no ascorbic acid added or with only 50 ppm showed slightly more deterioration.

On the basis of the results obtained in the experiments herein reported, and from the results reported by other investigators, the following recommendations may be made in preparing cream for frozen storage:

1. Store only fresh cream, free from developed acidity.
2. Use every effort eliminate metal contamination.
3. Pasteurize at a high temperature such as 170° F. for 20 to 30 minutes or 180° F. for five minutes or longer.
4. Standardize the fat content to about 15 per cent fat and then condense to about 40 per cent fat and 20 per cent serum solids.
5. Store in covered, well-tinned containers.

This article is based on a paper presented during the 1950 convention of the International Association of Ice Cream Manufacturers, held in Atlantic City, New Jersey.



Lily* Mixrites move

**FOUNTAINS COAST TO COAST
HAVE PROVED THAT ICE CREAM
GALLONAGE GOES UP WHEN
MIXRITE CUPS AND DISHES
GO TO WORK**

HERE'S WHAT HAPPENED! Lily-Tulip took a long look at fountain ice cream sales, and asked the question: How can a paper fountain service be made to sell more ice cream? Users agreed paper service saved them time, labor and breakage — was the most efficient operation. "But—" they asked, "how can you give the service more glamour?" Lily engineers created the Mixrite team of cup and dish — then, Raymond Loewy, nationally known designer — showman — salesman extraordinary, made them beautiful in appearance, dynamic in performance. Stores using this merchandising team report substantial increases in sales of sodas and sundaes.

WHY DO MIXRITES STIMULATE SALES?

First, because people are suggestible — they buy what they see! The more tempting a sundae appears, the more people will say "I want that!" The Mixrite dish produces many "me too" sundae sales. It's wide and shallow, has a pyramid center that holds the ice cream high, positions it positively, shows it off to perfection whether it's a one-scoop or a spectacular sundae. Portions look huge and generous — tempting.

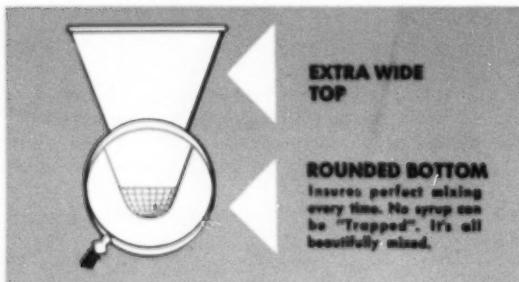


Second, because people are taste-conscious! A luscious ice cream soda brings them back for more. The Mixrite soda cup, with its rounded, whirlpool action bottom, blends all the syrup, all through the drink. That means better-tasting sodas every time — more repeat business.



This is showmanship, salesmanship . . . with FOOLPROOF CONTROL, because Mixrites make anyone a master fountaineer. Every soda, every sundae has that appearance which tempts, moving more ice cream from the can to the counter.

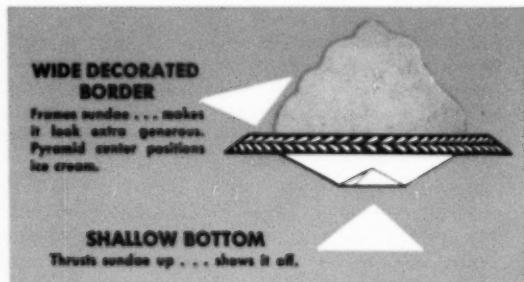
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In national competition, Anne Foster of Chicago won the "Golden Scoop" for her fabulous creation "The Circus and Clown". Contests of this kind are attracting attention in every state of the Union. Notice how the Mixrite dish lends itself to this kind of promotion. It's perfect for "super" as well as plain sundaes.

*T.M., Reg. U.S. Pat. Off.

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INTERIOR OF McClary's Lynwood (California) store is shown in the top photograph. Note the self-service ice cream cabinets which account for a considerable proportion of the store's extensive take-out sales. The center photograph shows the "Small Fry Circus Room." A birthday party is in progress. Owners of the McClary Ice Cream Company are pictured in the bottom photograph. From left to right, Earl McClary, Mrs. A. Marie Mitchell, and Robert B. McClary.

EARL E. McCLARY, for many years identified with the ice cream industry in Los Angeles and vicinity and currently one of the owners of the McClary Ice Cream Company, is a believer in the "old-fashioned" kind of ice cream. He enjoys reminiscing about his younger days when frequently he and his boyhood friends "would eat ice cream until it literally ran out of our ears."

And Mr. McClary emphasizes: "Well, believe it or not, we use the same ingredients today as we did then. Rich full cream, eggs, sugar, fruits and nuts." He might have added that patrons of the four McClary stores can enjoy this fine product in a great variety of concoctions—malts, sodas, frappes, parfaits, sundaes, banana splits. Also, they can buy it pre-packaged or hand-packed ice cream for home consumption. And novelties such as ice cream pecan rolls, cakes, pies, and fruit-topped tarts are available, too.

The firm does not rely on the quality and variety of its ice cream exclusively to encourage store traffic. A "Small Fry Circus Room" has been created in one section of the company's newest stores in Lynwood, California. Designed to accommodate youngsters, the room serves to make them feel important and wanted, as does a prominently-placed sign which reads, "No parents allowed unless accompanied by their children." Parents are encouraged to take children to this room for service and in this way the room is in use most of the time.

The room is decorated with hand-painted animals consuming various McClary products. Drapes are included among the fixtures, and the room may be prepared to assure privacy to private parties. Birthday parties for youngsters are often conducted here.

Mr. McClary's co-owners include his son, Robert B. McClary; a daughter, Mrs. Eloise McClary Mollere; and Mrs. A. Marie Mitchell. Mrs. Mitchell has been associated with the elder Mr. McClary in the ice cream business for close to twenty years. She was his first employee in his first ice cream store, and is now a partner in the McClary Ice Cream Company and has complete charge of the stores. She has achieved a nationwide reputation for her outstanding work as a member of the National Association of Retail Ice Cream Manufacturers.

In addition to the plant-controlled retail store at 3303 Century Boulevard in Lynwood, the other McClary stores are located at 4173 W. Venice Boulevard, 9145 So. Broadway, and 4680 Eagle Rock Boulevard.

PACK IT IN PURITANS

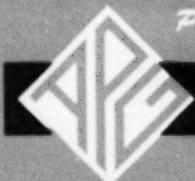


Oh boy! This is good!

Wouldn't it be great to win praise like this from scores of new customers every day? Well, good quality and smart selling usually do the trick.

Puritans can present your brand to the public in a most appealing manner to help coax customers away from brands less attractively packaged. See what a big help Puritans can be in successfully merchandising your ice cream. Write today to our Advisory Service — without obligation. Address: Kensington, Conn. or 4711 Foster Avenue, Chicago 30, Illinois.

Puritan—a Long Established Name in Cups



THE AMERICAN PAPER GOODS CO.

KENSINGTON, CONNECTICUT • CHICAGO ILLINOIS

SINCE 1893

AUTOMATIC VENDING

BY ARTHUR E. YOHALEM

LIKE any other ice cream retailing enterprise, automatic merchandising must be gauged not only by an ability to produce the "plus" volume that helps build plant gallonage, but by the net profit it generates. In any analysis of the value of vendor sales, costs must be evaluated—along with gross receipts—for the final answer as to whether use of "silent salesmen" is warranted.

Because ice cream vending has constituted, until recently, a relatively minor phase of automatic merchandising, and because the limited number of firms in the field have been somewhat reticent about disclosing data that they felt might encourage competition, facts and figures on the subject are somewhat sketchy. Even where sales reports have been publicized, it's important to bear in mind that such statements apply to that particular make of vendor—functioning for a specific period under localized conditions where fixed product and operational costs are applicable. Thus, if a "break-even" figure, for example, of 50 unit sales per day is cited for a particular machine in one city, this information cannot generally be superimposed on the potential of another vendor or another territory.

Direct Cost Factors

As an illustration of this point, one of the country's outstanding East Coast independent operations, featuring a 10-cent cup, has registered well over the million unit sales mark for the past few years, adding better than 125,000 "plus" gallons to the supplying ice cream plant's annual output. But any effort to analyze this operation for the purpose of using it as a working blueprint to organize a similar venture would have to take the following direct cost factors, among others, under consideration:

(1) *Investment in equipment (vending machines, delivery trucks, walk-in cooler, etc.) and its amortization.* In some instances, amortization has been computed at 1

cent per unit dispensed, but such data obviously varies with the purchase price and life of the equipment, etc.

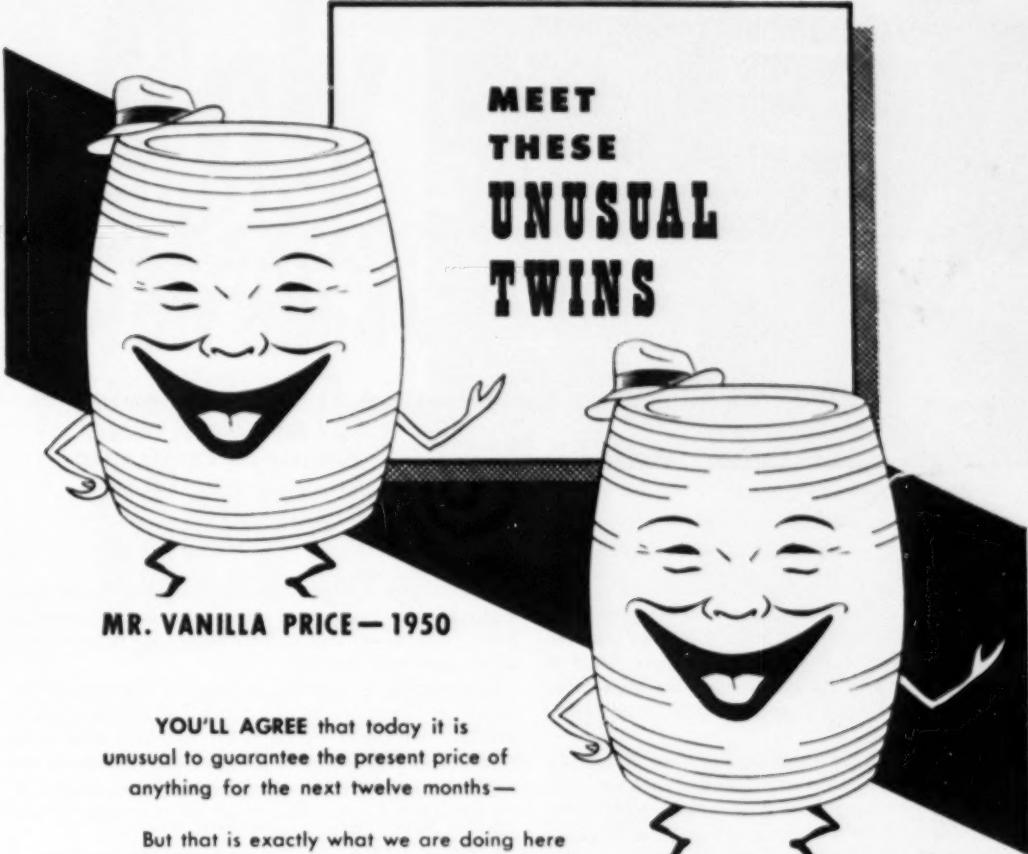
(2) *Product cost.* While most ice cream machines are currently geared to vend a 10-cent seller, the items wholesale at anywhere from 45 cents a dozen up, depending on the type (bar, cup, sandwich, etc.), quality of the product dispensed, and local milk market conditions.

(3) *Service cost, including labor to stock the vendors; mechanical maintenance; etc.* Employee wages vary widely from region to region, while the ability of a machine to "stand up" will be reflected in repair calls. At the same time, relative locations of vending sites can affect labor overhead. For example, a Wisconsin concern has some two dozen machines (which have vended 3,000 bars daily during a winter month) spotted in a large industrial plant. Since all the vendors are in a single factory site, ice cream delivery and per machine loading costs are obviously less than if each of the 24 machines was situated in a separate outlet.

(4) *Commission (percentage of gross vendor receipts) paid to locations.* While some firms have managed to hold this down to a high of 5% ($\frac{1}{2}$ cent per dime sale), in the face of increased competition for volume outlets a number of operators currently offer 10%, and, in some instances, the amount has jumped higher though, in these latter cases (where up to 25% has been paid) a relatively low-grade ice cream was sold. In office and industrial locations, where the installation of a vendor is looked upon as a "service" that improves employee working conditions, management generally regards commission (usually paid into an employee welfare fund, etc.) as a secondary consideration. However, in such stops as movie houses, supermarkets, gas stations, etc., the outlet is primarily interested in the revenue-producing side of vending and demands a high commission rate.

(5) *Administration.* Including such items as the salary

(Continued on page 81)



MR. VANILLA PRICE — 1950

YOU'LL AGREE that today it is unusual to guarantee the present price of anything for the next twelve months—

But that is exactly what we are doing here at Vanilla Laboratories. We are making contracts with our customers guaranteeing the maximum price of their Vanilla for the next twelve months—and that price is the same as they are now paying in 1950.

MR. SAME PRICE — 1951

Furthermore, our long-established business policy assures that any savings we can make on the cost of materials during the life of the contract will be passed on to the customers.

This unique price protection enables our customers to budget their Vanilla expense and at the same time buy to even better advantage than if they bought from month to month.

We make contracts for any length of time up to one year and will be glad to extend you our contract protection.

Vanilla Laboratories, Inc.
Rochester, N.Y.

PURES
BLENDS
CONCENTRATES
POWDERS

RETAIL STORE HOURS



BY HOWARD B. GRANT
Publisher, ICE CREAM FIELD

EVER since ICE CREAM FIELD advocated the exploitation of the Home Market for more sales of ice cream, letters have been pouring in from manufacturers and operators of retail ice cream stores. Most of them say, "getting ice cream consumed in the home is fine and dandy, but how about more business in the established retail outlets?"

It is apparent that the usual retail outlets such as the ice cream parlors, drugstores and confectioneries are losing volume. Some of it has gone to the grocery or supermarket with the advent of the self-service cabinet, and of course a fair percentage has been clipped off by the street vending trucks, cycles, and vending carts. To see the regular retailers drop off in volume is certainly not the desire nor the intent of the ice cream industry in its promotion of business through newer channels. However, too little has been done to help these retailers stay in business and sell more ice cream than in bygone years.

It has been suggested to ICE CREAM FIELD that we lead the drive against early closing hours which most retailers have adhered to in recent years. It was pointed out that the trend now among the nation's department and specialty stores is to stay open nights. For example, a large percentage of television sets are being purchased at stores open during the evening hours when the family has more time to shop. This tendency to make purchases during evening hours is very definitely growing with stores in more and more cities reinstating night hours.

A recent survey made by a group of eighty-five Connecticut druggists on preferred shopping hours among their customers indicated that a sizable volume of consumers are being lost by early closing hours. In this Connecticut survey, twenty-two percent of the customers questioned expressed the feeling that the stores close too early and that (logically) soda fountain sales were lost along with other business. Of 9,000 customers checked by these druggists,

over 2,000 expressed the opinion that they would have shopped in the drugstores if they were open in the evening hours. That meant that one out of every five potential customers may have been lost.

Confirmation is afforded in statistics released by the Carnation Company. In this firm's Los Angeles demonstration store, almost a third of the total sales occur after 9 P.M. The distribution of sales by hours is shown in the accompanying chart (reprinted from a recent edition of the *Carnation Mixer*). Percentages given are the average for six week days in October, 1949.

It is suggested that ice cream manufacturers encourage retailers to keep their fountains open at least during the evening hours of 7 to 10 P.M. Naturally, the decision depends on location and labor situation.

It is also recommended that these retailers under the guidance of the ice cream manufacturer make a distinct effort to capture some of the home ice cream business. This could be accomplished by throwaways or postcard announcements to the residences in the retailer's community that the store is willing to make home delivery of ice cream during the evening hours. These announcements could suggest that a phone call would result in ice cream being delivered to the customer's home during the evening hours while folks are entertaining or perhaps sitting around the television screen.

DISTRIBUTION OF SALES BY HOURS *Carnation Demonstration Store, Los Angeles*

11 a.m.-1 2	4.7%	6-7 p.m.	5.8%
12-1 p.m.	9.4%	7-8 p.m.	6.0%
1-2 p.m.	9.6%	8-9 p.m.	7.3%
2-3 p.m.	7.5%	9-10 p.m.	9.2%
3-4 p.m.	8.7%	10-11 p.m.	7.9%
4-5 p.m.	5.4%	11 p.m.-12	6.7%
5-6 p.m.	5.4%	12-1 a.m.	6.4%

Only Sweetose[®] Pays Off With 4-Way Better "Bite-Appeal" Here!

Taste it . . . count 'em! See how Sweetose syrup makes your ice cream (1) richer and creamier; (2) firmer bodied; (3) better textured; and (4) packed full with magnified natural flavor goodness! Put yourself in customers' shoes—you'll know why the switch to Sweetose syrup is going to boost your sales by giving your community an ice cream that can't be beat! YET Sweetose REPLACES HIGHER PRICED SUGARS IN YOUR FORMULAS! You'll increase sales and realize a bigger profit margin! Sweetose is totally different from ordinary corn syrup—enzyme conversion makes the difference. It's twice as sweet, three times as fluid, water-white, crystal-clear, odorless, with no flavor other than sweetness!

STALEY'S
Sweetose

Sweetose is a trademark of the A. E.
Staley Mfg. Co. Reg. U. S. Pat. Office

A. E. STALEY MFG. CO., Decatur, Illinois
In Canada, write to: 6876 Sherbrooke St., W., Montreal, Quebec

and Lower Costs Here

Pasteurizer, showing Sweetose meter and pipe line for automatic handling

GET FREE PROOF TODAY!

A. E. Staley Mfg. Co.
Dept. ICF-11, Decatur, Ill.

Gentlemen:

I'll take the "convincer" . . . give me proof positive of how Sweetose can give me the inside track on sales and still reduce my costs!

Name _____ Title _____

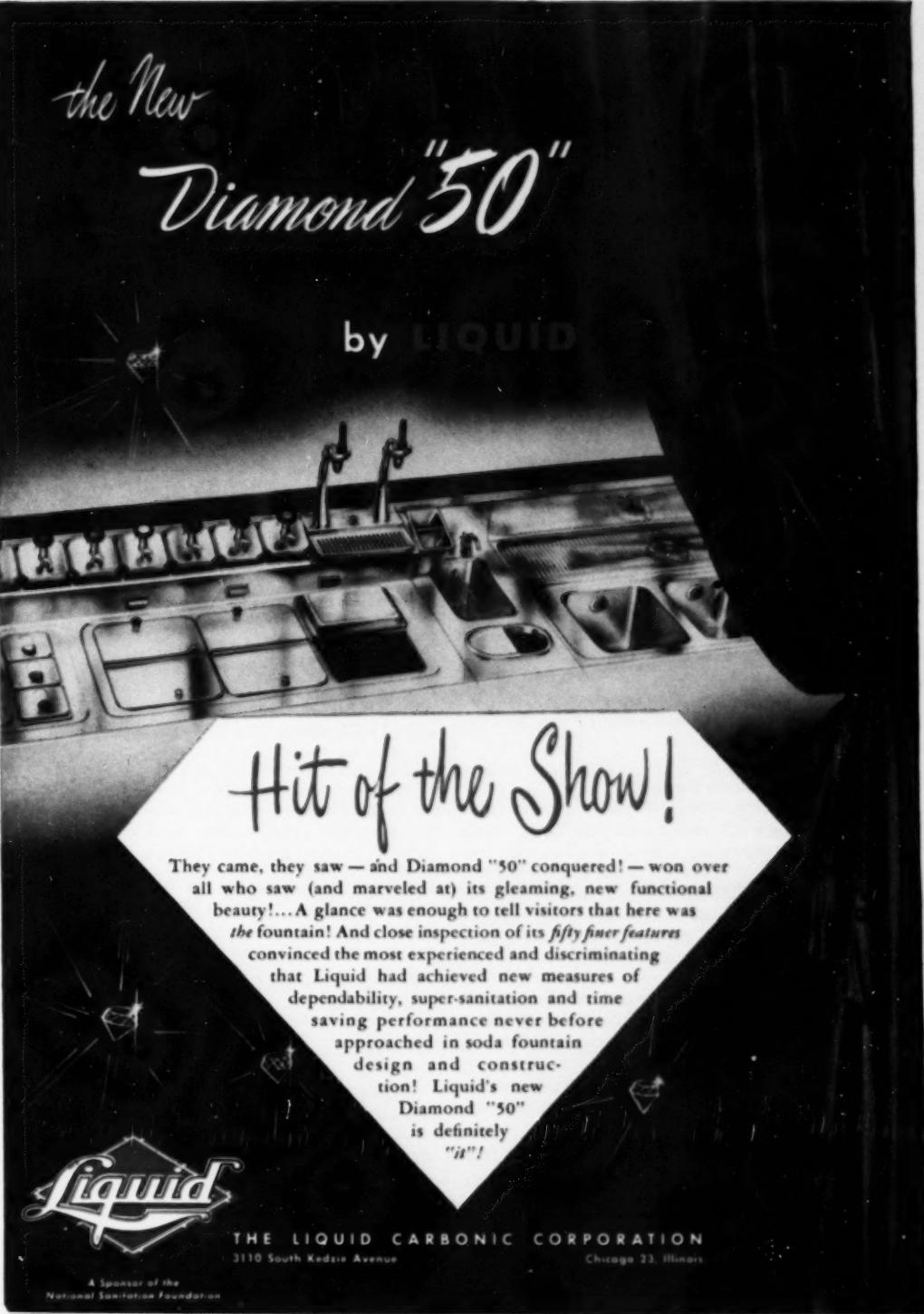
Company _____

Address _____

City _____ State _____

the New
Diamond "50"

by LIQUID



Hit of the Show!

They came, they saw — and Diamond "50" conquered! — won over all who saw (and marveled at) its gleaming, new functional beauty!... A glance was enough to tell visitors that here was *the fountain!* And close inspection of its *fifty finer features* convinced the most experienced and discriminating that Liquid had achieved new measures of dependability, super-sanitation and time saving performance never before approached in soda fountain design and construction! Liquid's new Diamond "50" is definitely "it"!



THE LIQUID CARBONIC CORPORATION
3110 South Kedzie Avenue

Chicago 23, Illinois

A Sponsor of the
National Sanitorium Foundation



\$1,000,000 Plant

CONSTRUCTION has started on a new \$1,000,000 Sealtest ice cream plant at Pittsburgh, Pennsylvania, which, when completed, will be capable of producing four million gallons of ice cream a year.

The plant will be located on Browns Hill Road, below Beechwood Boulevard. The Rieck-McJunkin Dairy Company's present plant at Forbes and Stevenson Streets, now used for both milk and ice cream production, will be continued only as a milk plant upon completion of the new building, which will be used exclusively for the manufacturing of Sealtest ice cream.

Modern Equipment

The first floor area will contain more than 50,000 square feet, with all manufacturing sections completely air conditioned by filtered air. With the interior of tile and stainless steel construction, the building will feature some of the most modern sanitation devices and manufacturing equipment, W. K. Niebaum, the company's chief engineer, stated.

Storage facilities, cooled to 20 degrees below zero, will be available for the keeping of 100,000 gallons of ice cream. The total refrigeration load will be about 800 tons. In addition to its four million gallon per year capacity for the processing of ice cream, the plant will also make possible the manufacturing of 1,000 dozen frozen novelties per hour, Mr. Niebaum said.

Likewise, freezing capacity to make 5500 gallons of ice cream per hour will be available. Six 3,000 gallon stainless steel refrigerated tanks will be provided for the storage of incoming cream and other liquid products. There will also be five 3,000 gallon stainless steel tanks for the refrigerated storage of ice cream mix.

While three receiving platforms have been planned,

there will be an enclosed driveway through the receiving area for liquid products received in cans or tank trucks. Electric conveyors will transport products from the production line to refrigerated storage areas. Conveyors likewise will eventually carry products from storage areas to waiting trucks for customer delivery.

800 Tons of Refrigeration

A 1,000 horse power compressor will provide for 800 tons of refrigeration. Gas will provide the fuel throughout the plant for pasteurization, sterilizing and heating.

Outstanding in the plant's equipment is the provision for the most recently designed facilities for high temperature short time pasteurization, assuring complete pasteurization of ice cream products while guarding against any loss in flavor qualities.

The new building will also house the company's quality control laboratories where hourly tests check standards and qualities of all ice cream and other frozen products.

Exterior of the building will be of brick and steel, with limestone trim.

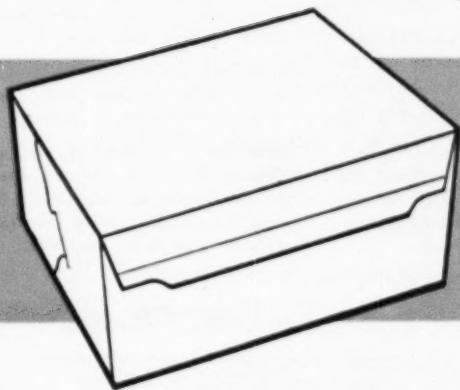
40-Truck Garage

In addition to the new plant and office building, the company will also construct a 40-truck garage as well as space for employee parking facilities. A cabinet service department for the servicing of dealer ice cream storage cabinets will likewise be maintained on the premises.

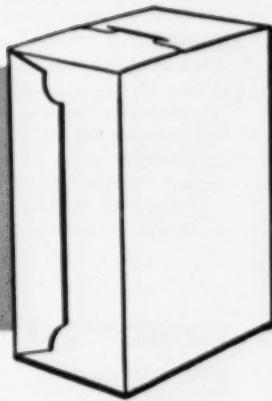
The new ice cream processing plant will serve Sealtest ice cream dealers throughout Southwestern Pennsylvania. Rieck-McJunkin Dairy Company, which is a subsidiary of National Dairy Products Corporation, also operates ice cream plants at Erie and Altoona.

FOR BIGGER SALES...

Bulk Packaging is Best



**Bloomer Bros.
Half-Gallon
Linerless**



Half-gallon sales are gaining ever larger shares of the market.

Bulk sales make the package more important than ever.

**Bloomer's Half-Gallon Linerless combines perfectly
Sales Appeal... AND... Sturdy Strength**

The sparkling surface, satin-smooth, flatters the top-quality printing... Heavy wax treatment applied by a special process... Easy-opening flap for slicing or dipping... Available in stock designs, or to your private specifications.

Firm stock (.028 point) made especially for bulk containers... Precise die-cutting and gluing assure a rugged package... Slot and tongue closure for easy closing and positive lock... Accurate measure... No holding forms necessary.



We'll be glad to send you samples

**BLOOMER
BROS. COMPANY
NEWARK
NEW YORK**

Coming Events

NOVEMBER 12-15—Palmer House, Chicago; Convention and Exhibit of the National Automatic Merchandising Association.

NOVEMBER 14-15—Hotel Ward, Aberdeen, South Dakota; Annual Convention of the South Dakota Dairy Association.

NOVEMBER 15-17—Lubbock, Texas; 2nd Annual Dairy Manufacturers Short Course at Texas Technological College.

NOVEMBER 27-29—Hotel Nicollet, Minneapolis, Minnesota; Annual Convention of the Northwest Ice Cream Manufacturers, the Milk Dealers, and the Minnesota Gophers.

NOVEMBER 29-30 — Hotel King Edward, Toronto, Ontario, Canada; 34th Annual Convention of the Ontario Association of Ice Cream Manufacturers.

DECEMBER 5-7—Hotel Schroeder, Milwaukee, Wisconsin; Annual Convention of the Wisconsin Association of Ice Cream Manufacturers.

DECEMBER 5-7—Hotel Palm Beach Biltmore, Palm Beach, Florida; Annual Convention of the Southern Association of Ice Cream Manufacturers.

DECEMBER 10-12—Hotel Broadview, Wichita, Kansas; Annual Convention of the Kansas Ice Cream and Milk Institute.

DECEMBER 11-13—Hotel Morrison, Chicago; 1950 Convention of the Illinois Dairy Products Association.

JANUARY 3-FEBRUARY 23—Purdue University Short Course, at W. Lafayette, Indiana, campus; subject: dairy manufacturing. Information can be had from V. C. Freeman, Associate Dean of Agriculture, Purdue University, W. Lafayette, Indiana.

JANUARY 5-6—Hotel Sherman, Chicago; Annual Convention of the Dairy Queen National Trade Association.

JANUARY 16-17—Hotel John Marshall, Richmond, Virginia; Annual Convention of the Virginia Dairy Products Association.

JANUARY 21-23—Hotel Jung, New Orleans, Louisiana; Annual Convention of the Louisiana Dairy Products Association.

JANUARY 22-26—University of Massachusetts Short Course in Elementary Ice Cream Making, Amherst.

JANUARY 24-26 — Hotel Carolina, Pinehurst, North Carolina; Annual Convention of the North Carolina Dairy Products Association.

JANUARY 29-FEBRUARY 2—University of Massachusetts Short Course in Advanced Ice Cream Making.

FEBRUARY 26-MARCH 9—North Carolina State College Short Course in Ice Cream Making, State College Station, Raleigh. Ice Cream Conference (March 9) winds up the course.

Massey's Vanillas

Flavor is our big talking point!



The Label of Quality

1214-16 WEBSTER AVE.
CHICAGO 14, ILLINOIS

If you are interested in the lead number, total ash, vanillin content, acidity, etc., of a pure vanilla, you can check our vanillas and find that they meet every requirement — AND MORE — but what we stress to you is the FLAVOR of our vanillas. Made from the finest vanilla beans grown — the pick of the various growers — you find a richness and mellowness in our vanillas that make them stand out from all others.

Write today for a sample gallon of Massey's vanilla. You'll be delightfully surprised.

PURE VANILLAS
VANILLA AND VANILLIN BLENDS
IMITATION VANILLAS AND CONCENTRATES



LIBERTAD 62 GUTIERREZ ZAMORA, MEXICO

Massey's Vanillas

Americans are all self-appointed ice cream critics. They switch to the ice cream that pleases their taste, and the competition to tempt them with an ever higher quality product is extremely keen. People love a mix which reaches new heights of taste appeal, and their approval is reflected in increased sales. Today, approval is going more and more to ice creams stabilized by SPA* gelatine.

The drop of stabilizer, so small when compared with the other ingredients, has a great big job to do. And SPA does that job exceptionally well. It helps keep texture ice-free, all ingredients smoothly blended, and it releases all the delicious flavor instantly at tongue-touch. SPA performs these functions miraculously well because it was created by a unique new process to do just one thing... stabilize ice cream. The development of this superior English gelatine means manufacturers can give the public more of the kind of ice cream they crave. Yes, a drop of SPA can up your sales, too!

In spite of its amazing performance, SPA costs much less to use than ordinary gelatinas. The best place to prove its superiority is in your own mix, and we'll be glad to send you a generous sample to try without obligation. Just write to:



B. Young & Company of America, Ltd.

20 EXCHANGE PLACE, NEW YORK 5, N.Y.

Famous as makers of fine English gelatinas since 1818

*T. M. Reg. U. S. Pat. Off.



- POLYCOID "B"
- MIXACOID
- ATMOS

for Making
Quality Ice Cream

**Originators of Emulsification
for Ice Cream**

R. G. MOENCH & CO., INC.

11 Park Place

New York 7, N. Y.

Record DISA Show

from page 18

number of shipments abroad. Some customers from other nations came prepared to pay cash for complete plant installations."

Companies presenting other types of exhibits reported that not only were top executives visitors to their displays, but that dairy processors had sent their technical men and their research staff members to check on new developments. Dairy company heads wired for subordinates to hasten to the Show, and these in some instances then hurried to Atlantic City by airplane. A sanitation products manufacturer said that he had talked to more technical men at this Exposition than ever before, and felt that there had been an unusual amount of interchange of information between the plant men and the suppliers.

Largest of the nearly twenty-five displays which the suppliers and equippers have put on, the 1950 Dairy Industries Exposition utilized every inch of available space in Convention Hall, including a Skyway of the States, at the top of the building, never before used for exhibit purposes.

Efficient Organization

Exhibitors invariably expressed the opinion that the 1950 Exposition was the "best run of any DISA Show." Exposition Manager Roberts Everett gave credit for much of the Show's success to the energy and team work of DISA's permanent staff, to efficient organization within Convention Hall's personnel and by various official contracting firms, to a spirit of collaboration by Atlantic City's Convention Bureau, and to the unique facilities of Convention Hall itself. He then paid a particular tribute to the work of the DISA volunteer committeemen.

Only men and women concerned with dairy industrial enterprises were eligible to admission. They included not only members of Milk Industry Foundation, International Association of Ice Cream Manufacturers, International Association of Milk and Food Sanitarians, National Association of Retail Ice Cream Manufacturers, Dairy Industry Society, International and other industry groups holding concurrent Conventions, but also large numbers of butter cheese, dry milk and evaporated milk processors, technical men from colleges and universities and from food companies handling dairy products. Some 350 registrants came from twenty-five different countries beyond the United States.

Visitors to the Old Timers lounge, on the Skyway of States—which also housed an impressive display of dairy antiquaria—included twelve men who had been in the dairy industries for more than sixty years and fifty-four who had seen more than fifty years in the industry. Two had started working 1891. Thousands of other visitors also registered as "Old Timers" (twenty-five years) or as "New Timers" (first Exposition).

Plans for holding the next Dairy Industries Exposition

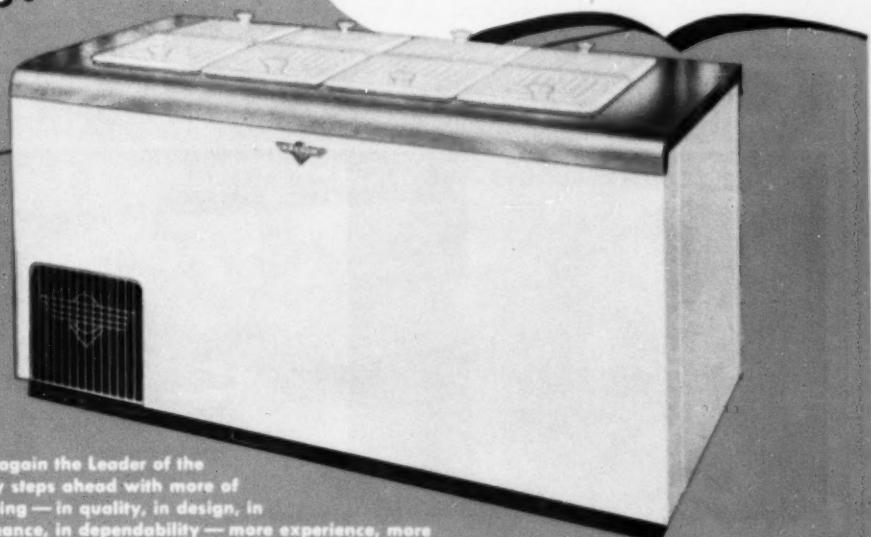
A Great NEW Line!

- ★ More Capacity!
- ★ More Beauty!
- ★ More Value!

... by NELSON ... the Originators of
Ice Cream Merchandising Cabinets

Compare Them! — feature by feature — and learn why
the New Nelsons promise even greater selling and profit
possibilities than ever before!

- * Up to a third more storage space without an increase in
floor area!
- * Eye-stopping appearance for increased selling appeal!
- * Improved engineering for long service life and lower upkeep!
- * Redesigned interiors for increased serving efficiency and
storage flexibility!
- * Advanced construction features for better product protection!



Once again the Leader of the
Industry steps ahead with more of
everything — in quality, in design, in
performance, in dependability — more experience, more
specialized know-how, more satisfied users all over the world
— than any other ice cream cabinet manufacturer
anywhere. Nelsons, more than ever, are still
"Built Up To A Standard, Not Down To A Price."

Send for the New Nelson Catalog

C. NELSON MANUFACTURING CO.

Prompt Shipment From Nelson Warehouses: Chicago • Pittsburgh • Reading, Pa. • Dallas • Houston • Highpoint, N. C. • Washington, D. C.



4010 N. DIXIE AVENUE
ST. LOUIS 12, MO.

on Navy Pier in Chicago, in the fall of 1952, were discussed informally by many exhibitors during the last days of the Show. The Exposition has been operating on an "even year" schedule, with the Dairy Industries Supply Association holding stand-by meetings in the "odd" years in connection with Conventions of Milk Industry Foundation and International Association of Ice Cream Manufacturers.

Wide Range of Products

The range and number of new products and new ideas introduced to dairy processors at the Exposition was greater than ever before, according to a spokesman for the Dairy Industries Supply Association, sponsor of the Show. New techniques, new designs, far-reaching improvements could be seen on all sides by visitors.

Processors and technicians also were impressed by the spreading voluntary adoption of 3-A Sanitary Standards. These are equipment standards, having sanitation significance but not otherwise tending to bring about uniformity, worked out jointly by equipment manufacturers, public health officers and processors. Manufacturers of equipment, the Show revealed, are regularly incorporating suggested 3-A recommended Standards in their new products.

An even further increase in the use of stainless steel was noted by experts at the Exposition, and it was pointed out that improved methods of welding, achieved since 1948, and better workmanship generally, have made possible

great advances in what were once considered hardly improvable standard pieces of machinery.

Practically all registrants sensed the significance of the labor-saving machinery, with methods of absolute control, unlike any seen in earlier Shows.

The diversity of innovations embraced—containers, ingredients, chemicals and refrigerants, special commodities and services, delivery equipment and plant equipment, and an item-by-item description became impractical. No phase of dairy processing operations was neglected.

Ice cream problems were attacked from many angles. Novelty devices and soft ice cream production were featured, as were an ice cream sandwich machine that produces 300 dozen and more sandwiches an hour, and an ice cream cake loaf machine that operates on a generally similar principle, placing the ice cream between evenly spaced wafers and hardening a series of these into a cake. Cartons for individual ice cream servings, packaged for home or fountain, fit into a widening picture of sales promotion devices. A continuous ice cream quick hardening machine, usable also for freezing food, is tailorable to a variety of plant sizes: soft ice cream or packaged food moves on a sort of conveyor through a tunnel through which refrigerated air is continually forced. Freezing is accomplished in three to four hours, capacities varying from 4500 to more than 8000 pounds an hour.

Ingredients displays likewise revealed innovations. Powdered vanilla is pre-packed in weights conformable to

HOSPITALITY HEADQUARTERS



Northville Laboratories at the Dairy Industries Show was host to hundreds of interested visitors. In addition to hospitality, the Northville booth featured the highest quality ice cream vanillas—in a great variety

of forms. Both the hospitality and the vanillas were appreciated by all—and no wonder, because both were backed by the sincerity and high standards which have marked the many years of our business.

Thanks for dropping in—we look forward to seeing and serving you at your plants.

Northville
VANILLAS

NORTHVILLE LABORATORIES
INC.

Northville Michigan

In Production!



In Sales!

Your Best Bet is

NA-PE-CO

The All-Purpose Emulsifier for
Ice Cream and Low Fat Mixes

NA-PE-CO Improves Body . . . Texture . . . Taste. Through improved emulsification, Na-Pe-Co in conjunction with any stabilizer . . . provides your finished product with creamy smoothness despite varying temperatures and heat shock. Ice cream made with Na-Pe-Co melts down evenly . . . retains its velvety smooth texture and creamy taste.

NA-PE-CO Reduces Whipping Time. By improving emulsification . . . Na-Pe-Co reduces whipping time, yet permits more closely controlled over-run.

NA-PE-CO Produces Dry Ice Cream. Na-Pe-Co makes it possible for the mix to incorporate and retain air at lower freezing temperatures, resulting in a firmer bodied, drier ice cream. It is this fine texture and firm body that enhances the dipping quality of bulk ice cream.

NA-PE-CO Is Easy to Use . . . Blends With Any Formula. Na-Pe-Co has been scientifically blended and processed . . . is 97% solids. It is easy to handle . . . entirely soluble.

National PECTIN PRODUCTS Company
2656 W. CULLERTON ST. CHICAGO 8, ILLINOIS

You Will Make a Better Product When You Use a *National Stabilizer or Emulsifier*

ICE CREAM FIELD, November 1950

MORRIS

Paper Cans

ECONOMICAL! ATTRACTIVE! SANITARY!



Buy Cans As You Sell Ice Cream

You do not have to own a year's supply of cans at any one time. 25% of your can requirements will be delivered in each calendar quarter of the year.

* MANUFACTURED AND DISTRIBUTED BY

MORRIS PAPER MILLS

135 SOUTH LA SALLE ST., CHICAGO 3; ILL.

NATIONAL FOLDING BOX CO.

NEW HAVEN, CONNECTICUT

Also Distributed by

CHERRY-BURRELL CORP. • The CREAMERY PACKAGE MFG. CO.

Branches in Principal Cities

standard batch requirements; the uses of powdered banana and a variety of other new flavors and flavor mixtures for ice cream were demonstrated.

Fully automatic vending machines for ice cream, for milk in containers, and for other products exemplified, with glittering lights and change-jingling contraptions, a growing acceptance of mechanical purveying, especially in industrial plants.

There was much more to be seen. Spoons with two ends, so that which ever comes first from the wrapper may become the handle; container cases with "give" in the bottom; ice cream cup dispensers with electric crispers; case washers with sprays moving in all directions; and innovations, major and minor, helped to account for constantly sustained interest throughout the Show's full week and in every booth.

Overseas Visitors

Overseas visitors to the Exposition came in larger numbers than ever before, according to DISA officials.

Guests came from Japan, Norway, Sweden, Denmark, many Latin American countries, the Caribbean area, southern and central Europe, the British Isles—from just about everywhere.

Overseas guests to the panorama of modern North American dairy industrial might reported that most of the problems they brought to the Show were solved for them by the entrepreneurs, scientists, educators and technologists who make the Exposition the largest problem clinic in the world.

The election of Irving C. Reynolds of Toledo, Ohio, as President of Dairy Industries Society, International, the making of plans for intensified area development and public relations work and the approval of new membership dues, marked the fourth annual meeting of the Society, held concurrently with the Exposition.

Mr. Reynolds succeeds J. Findlay Russell of Larbert, Scotland, who has been named Area Director for Scotland. Joaquin Molano-Campuzano of Bogota, Colombia, was elected Vice President, and Ralph L. Young of Philadelphia was re-elected Treasurer.

In meetings throughout the week, the Committee on Area Development laid plans for intensive activities in the Western Hemisphere, in cooperation with DISI Committees on Education and Health Standards. Robert Rosenbaum of Philadelphia, Chairman of the Committee on Area Development, reported that DISI is already cooperating with the government officials in Puerto Rico, Cuba, and elsewhere in the Caribbean to build up all phases of the dairy industry in these areas.

In another Exposition-week event, Iowa State College, (Ames, Iowa), chalked up its tenth win in the Collegiate Students International Contest in Judging Dairy Products. The Iowa team won the coveted All Products Bowl, representing top team honors, which carries with it a \$1000 research fellowship award presented by the Dairy Industries Supply Association, co-sponsors with American Dairy Science Association of the event. They also won the cups for judging butter and cheese.

What factors affect ice cream body and texture?

"Body" and "texture" are often confused; they are not the same.

BODY

One test for body in ice cream is this: with your tongue press the ice cream against the roof of your mouth. It should offer some resistance. On the other hand, it should not be so hard that it won't flatten out. Body refers to the consistency or firmness of ice cream.

TEXTURE

Texture refers to the finer structure of ice cream...smoothness or coarseness...how it feels to the tongue.

You can have good body, poor texture, or vice versa.

In general, body is concerned with the ingredients that go into the mix—the quality of the ice cream as a whole. And, in general, texture is concerned with the size, shape and arrangement of the mix ingredients during and after freezing. However, almost every factor entering into ice cream manufacture—materials, processing, freezing and storage—affect both body and texture.

Stabilizers (like Swift's Gelox) are important to body and texture. More than any other ingredient, a good stabilizer guards the body and texture from the time the ice cream leaves the freezer until it is served. Ice cream that's excellent when frozen may be only mediocre when served. Stabilizers tend to maintain during storage the desirable body and texture characteristics established during compounding, freezing, and hardening of the ice cream.

Common body defects

Soggy body—This is a heavy-body condition and is often associated with low overrun in proportion to the total solids in the ice cream. Other causes are:

(1) High milk-solids-not-fat, plus high sugar content; (2) Freezing at too low a temperature when using a continuous freezer.

Weak body—This may be caused by:

(1) Insufficient stabilization; (2) Low total solids; (3) High overrun.

Fluffy body—This is the direct opposite of soggy body and is due to (1) low solids content or (2) excessive overrun.

Common texture defects

Coarse texture—This is the most common of all ice cream defects. It means the presence of large ice crystals. Such ice cream usually seems colder to the tongue. Possible causes:

(1) Insufficient stabilization; (2) Low total solids; (3) Improper homogenization; (4) Improper freezing—drawing ice cream too soft from freezer; (5) Heat shock—re-hardening soft ice cream.

Crumbly texture—Even though the ice cream is crumbly, it may not be coarse. Crumbly texture may be caused by:

(1) Improper stabilization; (2) Low sugar content; (3) Too high homogenizing pressure; (4) Too high overrun.

Buttery Texture—This defect is characterized by a layer of fat that adheres to the roof of the mouth when the ice cream is eaten. It is often caused by poor homogenization, slow freezing or excessive whipping.

Gelox

Gelox aids greatly in producing strong body, smooth texture and keeping the ice cream in that condition until served. This ability depends on two qualities: (1) Gelox is a properly balanced stabilizer, and (2) the several different mechanical ways it improves and protects the ice cream.



When comparative tests of ice cream are made, the ice cream should be subjected to conditions comparable with normal handling procedures. In other words, the tests should be as nearly as possible on the basis that ice cream is generally held and served.

This kind of test is one reason why hundreds of ice cream manufacturers prefer Gelox. They say it gives their ice cream a distinctive, strong body and an extra smooth texture—then keeps it that way.

Order a trial shipment at the quantity price for testing in your own plant. If not satisfied, you may return the unused product for credit at our expense.

Swift & Company

Stabilizer Department
CHICAGO 9, ILLINOIS

Makers of Gelox, Vestirine, and
Vel-o-teen Ice Cream and Sherbet
Stabilizers and Velvatec food gelatin

cluded the session by explaining the how's and why's of the fact that "Ice Cream Is Nutritious."

The Controller's Council held the first of three well-attended and informative meetings on the afternoon of October 18. Such topics as "Know Your Costs," "The IAICM System," "The Accountant as an Office Executive," and "Distributing Overhead Costs to Products" were covered the first day. At subsequent sessions, pointers were given on "The Manual Adaptation of Mechanized Accounting Methods," "Standards of Performance as a Means of Control," "Distributing Delivery Costs to Products," "A Review of Methods for Recording Customers' Gallonage," and a summarizing report on "What We Have Heard." Some of the best-known and most authoritative accountants in the ice cream industry participated in these sessions.

At the Second General Session on Thursday morning, Mr. McKenzie delivered the President's Address, and Mr. Hagan issued the Treasurer's Report. Talks by Dr. Edwin B. George of Dunn & Bradstreet, Owen B. Richards of the American Dairy Association, Fred Sorrow, Atlanta (Georgia) publisher, and Frank Lovejoy, Socony-Vacuum Oil Company, Inc., were heard. Of particular interest was Mr. Lovejoy's dissertation on "The Price of the Best Is

all the Rest." This session far exceeded its scheduled time limit but no complaints were heard as the delegates listened enthusiastically to the inspired comments of the oil firm's representative.

The Merchandising section proved to be one of the most valuable phases of the Golden Anniversary convention. Three sessions, including the third general session were devoted to this portion of the program, all of which were sponsored by the Ice Cream Merchandising Institute.

An original skit, depicting the problems confronting an ice cream salesman when he attempts to sell a dealer who demands equipment bribes, was a feature of the Thursday afternoon Merchandising meeting. This was effectively presented by William Baily, Ice Cream Sales Manager of Donland's Dairy, Toronto, Ontario, Canada; and Clarence Doyle, Ice Cream Sales Manager of Acme Farmers Dairy, in the same city.

At the same meeting, Louis J. Wainer, Penn Dairies, Inc., Lancaster, Pennsylvania, and Dan J. Ball, Beatrice Foods Company, Chicago, gave their viewpoints on the problems of "Merchandising Ice Cream Through Grocery Stores and Super Markets." Then A. C. Kunkel, Breyer Ice Cream Company, discussed the "Acceptance of the Half-Gallon Package."

Other speakers at subsequent meetings of this section included Glen E. Weld, Bridgeman Russell Company, Duluth, Minnesota ("Driver Salesman Training"); H. R. Moorman, Fairmont Foods Company, Omaha, Nebraska ("How Much Per Gallon Should Be Allocated to Advertising?"); H. R. Scheid, Fenn Bros., Inc., Sioux Falls, South Dakota ("Increasing Bulk Ice Cream Sales"); Vernon F. Hovey, Jr., General Ice Cream Corporation, Schenectady, New York ("How Small An Account It Is Profitable to Serve?"); and Arthur ("Red") Motley, Parade Publications, New York City ("Nothing Happens Until Somebody Sells Something"). A dramatization of "The Autopsy" was a special feature of the third general session. It was appropriate, amusing and highly interesting, of course.

A wide variety of topics was covered thoroughly in the meetings of the Production and Laboratory Council. Much time was devoted to such problems as plant sanitation, production and quality control, and modern packaging machinery and methods. Representative examples of the papers presented during these and other sessions of the International's convention are published elsewhere in this issue. Additional articles based on talks delivered during the three-day conclave will appear in future editions of ICE CREAM FIELD.

On the social side of the convention activities, several events were high spots. The annual banquet, a night of entertainment and down-to-earth fun, and "Aloha Night," dedicated to retiring President McKenzie and Mrs. McKenzie, attracted many conventioneers. For the ladies, two special programs were arranged. One of these was the "Author and Authoress Afternoon," during which a large and enthusiastic audience was addressed by Emily Kimbrough and James Michener, authors, and Ned Calmer, news commentator. The other was a presentation of "Progress In Better Living."

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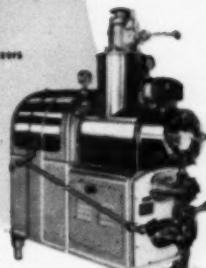
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Will You Be Ready for 1951 Production Needs

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Stainless Continuous Freezers



Series 80 Continuous Freezers

THERE'S A CP UNIT
FOR EVERY DAIRY
PRODUCT PROCESSING NEED

Right now is the time to look over your production facilities with these questions in mind:

Do you have enough equipment to meet your production needs?

Do you have the right equipment to do the job most efficiently and at lowest cost?

Can you depend on the equipment you have to keep producing steadily and without interruption through the foreseeable future?

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Mill Green Road, Mitcham Junction, Surrey, England

Bulk Sales

from page 26

enough? Do you as management want this bulk business developed? There are so many reasons why this programs can't be done, such as constant changing of employees, the lack of dealer interest, etc., and actually most of the reasons are a direct reflection on our ability. It is in most cases a definite lack of selling. The dealer in so many cases does not know the benefits realized from a well operated soda fountain. When he does know those benefits, the effects on profits for the rest of the store, he will then be interested and demand much help. Because of the failure to do a selling job in so many cases, those operations are poor and entirely disinterested—some even discontinue their bulk departments.

Bulk gallonage has decreased because the customer has not been getting value received—not getting its moneys' worth—too small portions for the price charged. The way many soda fountains are operated has definitely increased the take-home business. By almost necessity, sundaes and such are now being made in the home. If you have checked soda fountain operations you know what I mean; if you haven't you are in for an adventure. Most dealers don't know what the items are costing them, they don't know their gross or their costs—they may think they are losing money and it is all a necessary evil. Many customers like a malted milk because of the ice cream content of that

drink; many operations serve other than ice cream in that serving—is the customer getting what he expected or what he is paying for? Our servings must have beauty—eye appeal—to make folks want to buy, and should be properly proportioned so they make folks glad they did buy. We must glamourize and glorify those servings.

At times there is a tendency in our industry to trade down and in most cases this is a fallacy that does not tend to build for future ice cream sales. This same reasoning should hold true of competitive products—the very same dealers who at the start talk about a substitute to match that competition would not lower the quality of their other products to match a competitive situation. They would be afraid to—and shouldn't we? The consumer is our customer—he is the one who eats our ice cream. We should be very concerned about him and direct his thoughts to the dealer who handles our product for a profit. We've spent much time and money to make good ice cream, and the productive phase of our business has been developed tremendously. But we forgot about the people who buy our product—we don't know why they buy it or why they don't buy it. A study of human factors at a soda fountain and their reaction will give us the answer on how to proceed.

Old Equipment

Much of the soda fountain equipment in use is 20 to 30 years old. These setups in so many cases retard sales. Actually, there is no reason why our consumer would want to buy an ice cream item over the soda fountain. The emphasis on remodeling, right placement of the soda fountain, proper use of color and the proper installation for satisfactory service, will build bulk business. Let's inject the dealer's pride into his installation. Many companies have complete staffs to do this job for their dealer; they have layout departments and merchandising men. Other companies line up with a good fixture house and fountain company and they develop as a team.

Lack of sanitation at the soda fountain has lost us much bulk gallonage. This is one important phase of our business that we should all go to work on. Dirty dipper wells and such have eliminated many a hand-dipped customer. The lack of ordinary cleanliness at soda fountains has increased take home business and bulk gallonage has dropped. This one phase has caused many soda fountains to be unprofitable. Again we are concentrating on our product but not on who sells it. Let's concentrate on the people behind our fountains—on the people who have the controlling power to make or break—who are in direct contact with the consumer.

Isn't it almost criminal when we in the industry spend thousands upon thousands of dollars on equipment and know how to do the right job in our plants to insure practically bacteria-free ice cream—and then because we haven't the courage to stand up for our product to have it kicked around and abused? It takes fortitude, sincerity and conviction to straighten him out, but the dealer will thank you for it. It means profit to him and reputation, too.

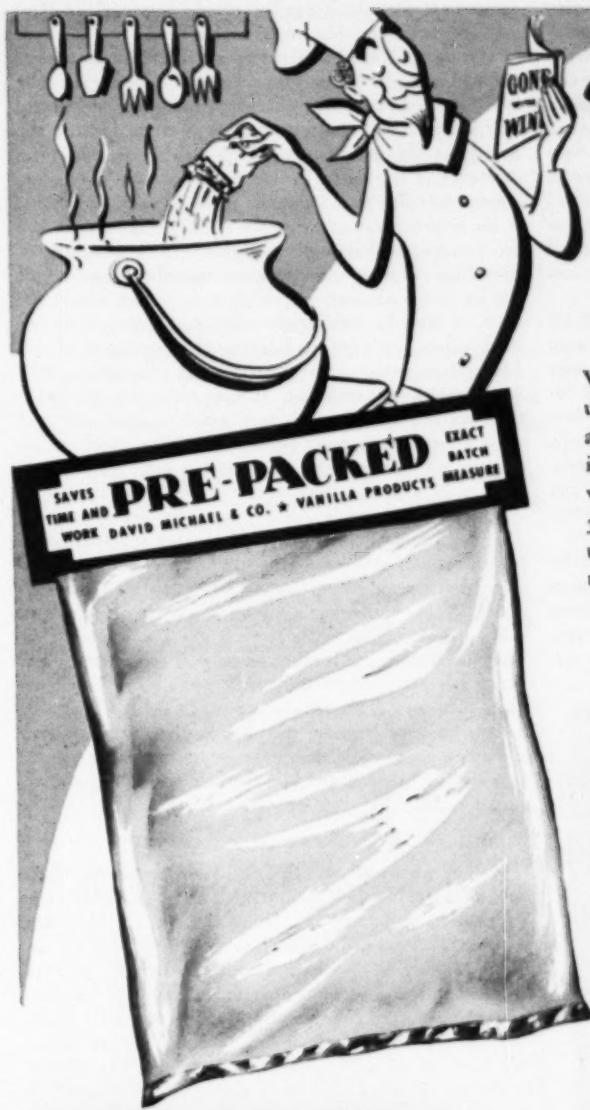
From the profit side most dealers are against hand-dipped

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SOLFAT DETERMINATOR
MORE SALES AND PROFITS

1 Eliminates Loss of Valuable Ingredients
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3 Helps Produce Uniform Taste and Texture
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TO TAKE THE GUESSWORK OUT OF FLAVOR MIXING!

With Michael's new pre-packed bag, measured flavor is guaranteed. There's no fuss and bother on your part about correct mixing because Michael's powdered vanilla flavorings are pre-measured in amounts *to suit your individual batches*. Michael customers using the new pack get assurance of flavor uniformity.

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Why not let all these helpful features of Michael's PRE-PACKED poly-ethylene bag go to work for you?



- elimination of guesswork with formulas
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Michael's PRE-PACKED bags reach you in partitioned cartons bound with metal straps for convenience and durability. Packaging is charged for at cost.

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TRUE VANILLA SUGAR
for custom made ice cream
TWIXT for popular-priced
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The Powdered Vanilla with the Locked-In Flavor

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Half a Century in the Flavoring Field
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ice cream. Do they know that by packing as hard as they possibly can, 6 quarts is the minimum they get from a 2½ gallon can of ice cream. Be sure to pack your own ice cream to find out. Maybe you will get a minimum of 6½ quarts. I am not advocating 6 or 6½ quarts for 2½ gallons—but am advocating showing the dealer how to hand pack so he will get a minimum of 7 quarts for 2½ gallons. Your territory will tell you the retail price—we have many at 45½ per pint and 85c per quart—some are higher, too! Your men should experiment with bulk ice cream so they are sold on what it will do. All size dippers should be used so confidence is created in your men. They will tell a more convincing story.

Uniformity of service is essential to increasing bulk ice cream sales. You know what's happened to the ice cream soda? You know the necessity of getting the same type serving each time without my going into it further. As for ice cream cones—does the dealer know the little chap who wants a cone and is treated right will dictate where the members of his family purchase their ice cream. Maybe 15 per cent will not pay overhead on a five cent sale, but combined with the overall ice cream selling line, it averages out.

Many dry accounts are converted by the use of fountainettes that fit into ice cream cabinets. Malted milk mixers are added to further departmentalize. Many grocery stores do a fine job with soda fountains—locker plants do, too. Have we used the information at hand to convince the res-

taurant operator that ice cream should be served; have we used any showmanship in cafeterias?

The things I have been reviewing contribute in part to our loss and you can think of things I have neglected to mention. It isn't the lack of understanding the situation, it isn't the lack of knowledge, neither is it the lack of materials available in order to sell bulk ice cream, but it is a deficiency in the matter of our own thinking. We say we are interested in bulk ice cream when actually we are not if the total volume of ice cream sales is satisfactory. We are not interested enough to demand the development of this phase. In many cases we must raise the importance of our ice cream salesmen—elevating them to this importance must be done by training, by teaching them so they can teach others. Let's get our salesmen to sell—instead of ask. Management must want this job done. Its got to be a sincere and honest endeavor. It must come from the heart. Give our salesmen the tools with which to work and then show them how to apply those tools. How much do we want to put into practice? Most dealers want the information we have been talking about. I think we are letting them and the consumer down if we don't give it to them. The way it looks today, if we don't, a good aggressive competitor of ours will—or maybe it will be a competitor not directly in the ice cream business. It won't require a concession of any kind—just a matter of showing him how to make a profit. This whole story is like a missionary deal and like religion, and is taken on only by a few. Mr. Hennerich has been such a missionary and he has developed many followers. Through the present I.C.M.I. school with its two weeks of intensive training, courage, determination and a new approach in telling the ice cream story are given. It is sending salesmen out into the field with a new stature and dominance in their respective territories.

Sales Personnel Increased

We have increased our salesforce, realizing our men must do a selling job in each account. We cannot send out mass information or figures and forget it. We are equipping our men with tools, the plans, the knowledge plus the desire to accomplish. We have a layout department, we have lined up with a good fixture house and fountain company—we are remodeling drug stores, restaurants, locker plants and bowling alleys in order to sell more bulk ice cream. We have set up a Merchandising Room for our dealers' employees. It is not used as an employees' lunchroom. It is not to be used as a gathering place for women's clubs to build good will. It is patterned after Mr. Hennerich's school in Washington but it will be greatly condensed. We hope to glorify the dispenser or dispenserette, indicate why they are important, why they should do a good job and what it means to them and to their store.

The industry has a planned program—it has the material—it has the men to create the enthusiasm—it has the men to use the know-how. So isn't it up to us as to how much of it we want to use and how desirous we are of increasing the sales of bulk ice cream?

NOW! with Temperature Control!

Start Building Dry Stop Gallonage Today with . . .



ICE CREAM manufacturers everywhere acclaim the gallonage building qualities of Bobette. Get your 1950 gallonage building program going today by ordering your Bobettes* for profitable promotion.

WRITE TODAY FOR THE BOBETTE* "PROFIT STORY."

* Reg. U. S. Pat. Off. No. 2465142. Other Pat. and Trademark Reg. Pend.

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PENNCO, Inc.

"PENNCO IS
SERVICE"

ABBOTT'S BUILDING,

PHILADELPHIA 7, PA.

This article is based on a paper read at the October 20 merchandising session of the 1950 convention of the International Association of Ice Cream Manufacturers. In Mr. Schmid's absence, the paper was presented by John Brockway, Secretary of the Iowa Association of Ice Cream Manufacturers.

Time and Motion

from page 34

used in the performance of a piece of work. This analysis is carried on for the purpose of:

1. Finding the most economical way of doing the work.
2. Standardizing the methods, materials, tools, and equipment.
3. Accurately determining the time required by a qualified person working at a normal pace to do the task.
4. Assisting in training the workers.

The mass production industries have made the most use of time and motion study. One of the most interesting chapters in our industrial growth has been the use of time and motion study in the automobile industry in the never ending quest for the one best way.

In recent years the use of time and motion study has been expanded to include nonrepetitive operations such as janitorial and maintenance work. Some branches of the food industry have made an extensive use of this valuable tool.

There have been a few instances of the use of time and motion study in the dairy industry, and some dairy companies have full time methods engineering staffs.

Procedure

Three dairies were selected for representative size. Dairy "A" received 20,000 pounds of milk daily, Dairy "B" 40,000 pounds, and Dairy "C" 100,000 pounds.

The cleaning of each piece of equipment was broken down into the basic steps that the workman goes through in the washing of the equipment. After the steps were determined, a stop watch reading was taken of each step. In general, ten readings were taken of each step and an average time determined. In order to determine the time required by an average worker to do these operations the performance was rated as to effort and this value multiplied by the average time, in order to level out exceedingly fast or slow workers. To this was added an additional 20 per cent to take care of personal needs, fatigue allowances, and allowances for avoidable and unavoidable delays. This is a purely arbitrary figure, but it is a figure that is widely used by methods engineers for work falling in this classification.

The only effect that the addition of allowances has on subsequent analysis is in the percentage of total labor cost represented by cleaning labor. In all other analyses this addition has no effect percentage-wise.

The number of steps in the cleaning of the different pieces of equipment varied from less than 10 to as high as 100. For instance, the time required to wash a homogenizer discharge valve was determined. The length of this presentation does not allow a discussion of the cleaning of these small individual pieces.

The amount of labor involved in the cleaning operation in dairy plants has long been a point of discussion among

dairy plant operators. The figures given for this labor by various individuals have varied widely. A figure often given is 50 per cent. One of the reasons for the wide variance in this figure is the variation in the different methods of calculating total plant labor. If the operations of washing cans and bottles were to be considered as part of the cleaning labor, then the figure would approach 50 per cent or even higher. In the case of a small dairy performing these operations by hand, this labor should be charged to cleaning operations.

Another cause of variance is the question of what constitutes total plant labor. If the labor of engineering and maintenance personnel, laboratory workers, plant superintendent, and route check out and check in men, is charged to plant labor, the per cent of labor represented by cleaning will be less.

In this study, the total plant labor was considered to be all the labor involved in receiving the milk, processing, washing and filling the bottles, and placing in the storage room.

The labor involved in loading out the route trucks was not considered nor was the time involved in actual checking in of the routes, but the unloading and stacking of the empty cases was considered. No engineering or maintenance labor was used. The plant superintendent's time was omitted but all working foremen and supervisors' time was included. The laboratory labor not directly concerned

(Continued on page 92)



Chocolate Products
in the Great
Dutch Tradition

VAN LEER
CHOCOLATE CORP.

Manufacturers of - quality coatings for ice cream bars
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Importers of - Holland-Dutch Cocoas



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AFTER THE HOME MARKET?

NEW ice cream SPADE is ideal for take-home promotion

Here, for the first time, is a spade specially designed for bulk tie-in promotions. Price to the ice cream manufacturer is attractively low.

The spade's highly polished aluminum finish and usefulness make it extremely attractive to the consumer. And after she has bought it as part of a combination offer with your ice cream, she'll find it so easy to use it will be a constant reminder to keep a supply of your ice cream on hand.

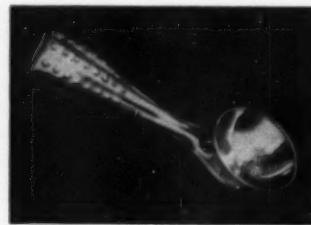
Sell more of your ice cream to the home market this winter with the Scoop-Rite Spade take-home promotion.



WRITE
FOR
DETAILS

SCOOPS

Made of one piece solid aluminum. Dips easier and faster. Ice cream won't stick, and no dipping in water is necessary.



SCOOP-RITE COMPANY 788 WILDE ST., DETROIT, MICH.

Half-Gallons

from page 28

price and then stamping it on the package. I can't stress the importance of this too strongly. We decided that the price should provide a 20 per cent profit on the gross (or 25 per cent markup). Don't think we didn't have a lot of dealers who flatly refused to handle any product with such a low gross. But we knew if we did not handle it this way, we would sell very few half gallons. If you leave it to the dealer to set the price, he'll set it so high that the consumer will not be attracted. After all, the big appeal is the economical price, without which the consumer sees no reason why he should buy a whole half gallon when a quart will do.

(2) The next step is to inform the consumer about the economical half gallon and the price—through newspapers and radio. What your salesman could not do to persuade the dealer, the consumer will do.

(3) Be sure, of course, that all your people who contact the dealer—the salesman, driver, cabinet man and order department—are fully sold on the half gallon as they can help swing many a recalcitrant dealer.

(4) It is most important that the appearance of the half gallon package be neat, sanitary and colorful and by all means give the impression of bulk ice cream. Uninviting packages deter sales, as the consumer is very much impressed by the package he takes into his home.

(5) Remember the half gallon package is a space robber. You cannot expect your dealer to handle half gallons unless you furnish him with sufficient equipment. We met this situation by installation of reserve cabinets of the standard variety and in the case of large dealers, by so called "reach-in" boxes.

Variety Required

(6) Don't think that you can have successful sales with only three or four flavors. We started with four flavors in the gallon but soon put it out in all of our current bulk flavors. Since the gallon has given way to the half gallon, we now have the gallon only in vanilla but have the half gallon available in all the current bulk flavors and in two combination packages of two flavors each, which we call "Half and Half." For October, we are experimenting with a three flavor vanilla, chocolate, strawberry half gallon, which we call the "Neapolitan" half gallon.

(7) Then, to top it off, you must depend on the good old artillery barrage of newspapers, radio and dealer helps, such as back bar strips and window trims. By constantly pounding home the message of the Breyer economical half gallon, we expect to sell well over 2,000 half gallons in 1950.

This article is based on a talk given during the October, 1950, convention of the International Association of Ice Cream Manufacturers, held in Atlantic City, New Jersey.

Automatic Vending

from page 58

of any supervisory personnel; office overhead; liability insurance; etc., this expenditure will vary with the scope of each enterprise.

Among the additional operating considerations that should be given thought is the actual amount of time the vendor will be accessible to patrons, since this determines annual volume. The average office and industrial plant, for example, operates on a 5-day, 40-hour workweek (prior to the war in Korea). If say 20,000 sales is the annual volume goal for each vendor, this means that, including holidays, there will be about 255 days each year over which the machine can register this total patronage—rather than 365.

Such sites, however, can produce a fairly steady volume of vendor sales and since the palates of workers in steam-heated buildings are not conditioned by outdoor winter temperatures, ice cream can become a year-round habit. In one Eastern city, where such stops make up the backbone of a large vending route, cold weather sales in this type of locale have held to within 25% of the summer level, and daily average, on a year-round basis, has been 1 vendor sale for every 5 individuals who have access to the machines' traffic areas. This, of course, does not mean that weather cannot affect grosses in other types of locations. For example, an increasing number of ice cream vendors

are being used in terminals, where they supplement manual refreshment facilities and pull patronage from travelers, who buy on impulse. Since these units are often located in "exposed" areas, their sales benefit when the temperature rises and slack off when it falls.

Similarly, certain types of high-volume locations are only available for seasonal operations. This summer, for example, three vendors were spotted at a California race course to test whether automatic merchandisers could supplement manual stands. Over an initial 10-day period, better than 20,000 brick-type packages were dispensed to crowds at the track, who were unwilling or unable to elbow their way to counter service and found the machines handier. (Vendors in seasonal sites can be shifted to winter locales, such as bowling alleys, etc., with the moving cost justified by the peak volume tallied by the machines as they follow amusement-seekers.)

This time element is also important in one of the newer sites to open up to ice cream vending—the supermarket, a 6-day spot. In one West Coast store, which also sold bulk for takeout, a "crunch" bar vendor attracted impulse patronage from shoppers and their youngsters. With the supermarket serving an average-income class of trade, this Spring the vendor averaged 60 bars daily, a figure that rose to 90 bars on Thursdays, when the store had its late evening and kept open until 9 P.M. On Saturday, the 6th and peak shopping day, over 110 bars were dispensed—all sales that might have been lost if the store had been closed.

THE HIT OF THE SHOW!

Our 1250 Gallon Ice Cream Body



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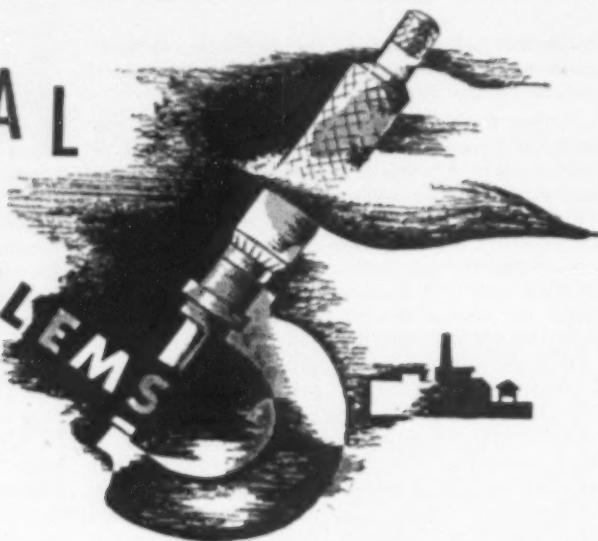
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The Reader Asks:

TECHNICAL

PROBLEMS



By DR. C. D. DAHLE
Technical Editor, Ice Cream Field

Production Difficulties?

I have read of your work in the making of ice cream and believe you may be able to help me in the improvement of one of our products. The formula used is as follows:

1.5% butterfat
16.0% serum solids
12.0% sugar
4.5% corn sugar
0.47% gelatin (275 bloom)
0.043% sodium citrate

This product is pasteurized at 160° F. for thirty minutes, then homogenized at pasteurizing temperature with single stage viscoilizer at 2500# pressure and cooled to 40-45° F. over surface cooler. We use fresh 40% cream, whole milk and 30% condensed milk. The acidity runs from .28 - .30%.

We are in the ice cream mix business and this product is used primarily for making malted milks. Several types of freezers are used by our customers; continuous, batch and counter freezer.

The complaint we get on this product is that the overrun is slow and also it is hard to get 100% overrun.

I have experimented with this product and tried different stabilizers, some with emulsifiers and others without. Also, I have worked with it using lower percentages of serum solids, but never have made the product satisfactory to all our accounts.

What would you suggest for making a product of this nature so that it will give satisfaction, regardless of the type of freezer used? Is our method of processing wrong, or is the general make-up of the mix wrong? We made a conventional 12%, 14%, 12% French vanilla, chocolate and a few other mixes and rarely have complaints.

Answer

I am somewhat puzzled as to the difficulties you are having getting overrun on the mix. Ordinarily a mix of low fat and high serum solids whips very rapidly, sometimes so fast that it develops the overrun before the mix can become properly frozen.

Inasmuch as you have tried emulsifiers to no success, I suggest

that you try freezing a little bit slower, or in other words using a little higher refrigeration temperature. With a very low refrigeration temperature as you might experience with a continuous freezer, there may be a delay in getting the overrun. By using a warmer refrigeration temperature, I believe you will be able to get the overrun.

As a last resort you might even try to add egg yolk, particularly dried egg yolk solids. I suggest that you use around 4% dried egg yolk.

Emulsifying agents would be of greater benefit in a higher fat mix than in these low fat mixes, but normally the low fat mixes whip very rapidly and I believe you can get your overrun by using a warmer refrigeration temperature or by adding the egg yolk solids.

"Crawly" Ice Cream?

Below you will find the formula we are now using and will thank you to comment on same as to its needs:

664 lbs. 40% sweet cream
1530 lbs. 4.2% milk
106 lbs. powdered milk
108 lbs. corn sugar
324 lbs. cane sugar
7 lbs. gelatine

At times this formula we are using for our ice cream seems to be very good. Other times the cream is crawly, or it falls apart and does not hold together.

Any information you may give us will be appreciated.

Answer

The composition of your mix figures out as follows: 12.1 per cent fat, 9.9 per cent serum solids, 15.6 per cent sugars and 0.255 per cent stabilizer, making a total solids content of 37.855 per cent. This is a fairly good formula, but I believe you should use a little more stabilizer. If your ice cream is crumbly and falls apart, it does not hold together, it is usually due to an excessive amount of overrun or lack of stabilizer. Also a shortage of sugar would tend to cause this trouble but you have sufficient sugar so I feel that perhaps the difficulty may be in the amount of stabilizer used. I would step this up to 0.3 per cent and possibly even a little more.

"Sandy" Ice Cream?

In the last few months I have been running into a little trouble in having sandy ice cream. As we know, this is caused from high serum solids. I cut my serum solids from 10.5 to 9 which I think is very low, but yet, once in a while, we do get a few cans returned because of sandy ice cream. I have been watching the fluctuation of temperature from ice box to truck to store keeper and have kept that pretty close as much as possible. I have two things in mind that I think might cause sandy ice cream.

1. Sweetened condensed milk
2. Low serum solids plus high sugar content

My formula is as follows:

80 gals. cream, 40% fat — 82 lbs. per 40 qt. jug
180 gals. milk, 3.7% fat — 85 lbs. per 40 qt. jug
300 lbs. sw. cond. skim, 42% sugar and 30% s.s.
200 lbs. sugar
75 lbs. dextrose
14 lbs. gelatin
8 lbs. dried egg yolk
5 gal. water

Answer

I cannot understand why you are having trouble with ice cream sandiness with the mix you are using unless there might be some fault in the composition that you are assuming for the condensed milk. The composition of your mix is as follows: 11.25 per cent fat, 9.25 per cent serum solids, 17.7 per cent sugar, 0.495 per cent stabilizer, 0.282 per cent egg yolk, making a total solids content of 38.977.

Here is one reason, of course, that may account for your trou-

ble and that is if your condensed milk is in barrels and you do not use an entire barrel at one time you may have in the lower part of the barrel of sweetened condensed milk some settling out of the lactose. If you use the upper half of the barrel in one mix and the lower half of the barrel in another mix, then of course you will find that the other mix will have much more lactose in than the previous mix. This can account for sandiness.

Quite a number of plants have experienced this difficulty when they use sweetened condensed milk and the lactose had settled out to any extent.

Of course cabinet temperatures must be maintained at a low degree at all times and the ice cream must not be allowed to get soft in the cabinet. This is one of the biggest factors in contributing to sandy ice cream. The truck temperatures should also be set so that the ice cream does not get soft while in transit.

Milk Bar Mix?

Would you please advise as to the proper formula for making a milk bar mix. I would like to use whole milk standardized at three per cent fat, and would like to run this mix through a Vogt continuous freezer and transfer it to bar molds by hand. This would be used for stick confections.

Answer

You can make a good milk bar mix by using the following formula. This would include three per cent fat, 13 per cent serum solids, 13 per cent sugar and stabilizer. Use whatever stabilizer you are now using for ice cream, but use a little more than you do for ice cream.

I am assuming, of course, that a three per cent fat ice milk mix is legal in your state. You should check with the Department of Agriculture to see if this is the case. If you are using a continuous freezer for making the product, do not freeze too stiffly. Otherwise, you will have trouble transferring the mix to the molds by hand.

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Refrigerating

from page 30

you need and quite possibly your refrigeration requirements are already adequately and efficiently provided for. Not that the power costs will necessarily be higher to provide the correct refrigeration; such a plant may actually be the more efficient. My point is that by providing adequate refrigeration for an overall smooth plant operation, relatively large savings in wages and possibly materials may be made and the emphasis should be placed on this rather than on the cost of providing the refrigeration.

Plant Requirements

So if my arguments have been convincing, you would no doubt agree that your refrigeration plant should be liberal in size and you may even want to go a step further and provide enough to take care of the prospective growth of the next few years. If it were a boiler you were buying, such reasoning might be O.K. After all, with a boiler, if you need less steam, you simply reduce the fuel and perhaps the draught. A refrigeration compressor, to the contrary, must be quite accurately balanced to the load. Under partial load, the horsepower per ton increases rapidly and what is even more serious, particularly for single stage machines working on the low temperatures of an ice cream plant, operation at reduced loads may cause extreme overheating and damage to the compressor. Permit me therefore to tell you how I would analyze plant requirements and the kind of equipment I would select.

To begin with, I would list the various items requiring refrigeration such as air conditioning, mix coolers, vats, high temperature refrigerated storage, each ice cream freezer, the various hardening rooms, the novelty tank and possibly a hardening tunnel and any other such equipment. I would group these items as to operating temperatures. For example, in a small plant, the amount of high temperature work such as mix cooling may be so minor that it would be done at the same operating conditions as the freezer and hardening room operation, that is, at about 0° ammonia suction pressure. We might have only a single compressor which possibly carries the hardening room and cools the mix. Then during the freezing period, it may operate primarily on the freezer and after freezing is finished, it works exclusively on the hardening room. This machine should probably be driven by a two-speed motor to be run at half speed when operating on the hardening room alone. We must provide enough cooling surface in the hardening room to balance the compressor capacity at half speed.

Larger Plants

On larger plants and in plants also handling milk, the mix cooling load would be handled by compressors operating at high suction pressure since that gives the greater operating economy and materially reduces the size compressor required for that part of the load. The freezers, hardening rooms and novelty tank would be grouped in the low suction pressure load. If the plant is large enough

to warrant the extra complications, the freezers may be in a group by themselves at possibly 3 to 5 pound suction pressure and the hardening rooms and novelty tank in still another group at possibly 5 inches vacuum. If there is a hardening tunnel, it would probably be operated at about 15 inches vacuum.

After these various loads have been grouped, some thought should be given to operating schedules. Perhaps, when the novelty tank is operated, only the freezers for the novelties would be in use, the main ice cream freezing being shut down. Some such scheme would keep the peak load down and hence require less refrigeration equipment, reducing both the first cost and the electric demand charges. Any such staggering of operations, however, should be considered in relation to production requirements as governed by sales, efficient utilization of factory personnel, payment for overtime, utilization and storage of incoming raw product and possible greater storage capacity for finished product as may be needed because of the staggered operation. Remember idle machines and idle men are unprofitable. Such considerations may far outweigh any possible reduction in capital invested and power cost for the refrigerating plant by staggering operations.

Consideration would then be given to partial load conditions such as night time operation of hardening rooms, truck cooling at night, freezer operation without novelty tank, etc., and compressors would then be selected for the various temperature groups to give the peak capacity and also the needed flexibility for part load. Even when operating flexibility does not require multiple compressors, it is advisable for all but very small operations to divide the load between a number of compressors so that in case of mechanical failure, at least operation at partial load is still possible. It may cost a little more to install several small machines rather than one large one but no matter how reliable the equipment may be, the slight extra cost is still cheap insurance against loss of valuable inventory and loss of trade.

Booster Compressors

While we are on the subject of compressors, serious consideration should be given to booster compressors, which is, in reality, compounding or two-staging. For the temperatures required in ice cream plants, the use of boosters will show a 15 to 20 per cent power saving. What is more important is that especially in summer time when discharge pressures are apt to be high, a single stage compressor must operate at just about its practical limit. In other words, the single stage plant must strain to the limit to attain the desired temperatures and the compressor runs so very hot that excessive piston ring wear, carboning of valves, valve breakage and other operating difficulties may be expected. If the load drops off, the situation becomes even worse. On the other hand, with a booster properly sized, desired temperatures are readily attained and the duty on both the booster and second stage machine is much less severe and drop off in load can be much more safely handled. Excepting for very small operations, I most emphatically recommend boosters for ice cream plants. The first cost

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is usually no greater than for single stage, efficiency is improved, operation is more reliable and low temperatures are more readily attained. Incidentally, the cheapest way to increase the capacity of a single stage low temperature plant is by the addition of boosters.

With the advent of the multi-cylinder ammonia compressors, you may wonder whether to stay with the old two-cylinder type which was new before prohibition and before Amos and Andy or whether there really is something to this modern development.

Having worked with both types, I think I can give an unbiased opinion based on experience.

The two-cylinder type uses slightly less power but considering the many items that go into total operating expense, the difference is not great enough to be a determining factor.

The two-cylinder type runs cooler and may therefore be operated at a somewhat greater compression ratio. This applies, however, only in the low suction pressure range where from a viewpoint of efficiency and lower first cost booster compressors should be employed.

The two-cylinder compressor is less likely to pump oil. No responsible supplier will install a multi-cylinder compressor without an efficient oil separator which is usually equipped with automatic means to return oil to the compressor so that oil pumping is not a real problem—in fact, such highly effective separators are recommended as very worthwhile auxiliaries for two-cylinder machines.

The multi-cylinder machine is considerably lower in first cost considering the lower freight and handling charges, the small foundation which can be built right on top of the floor, the less expensive motor of the normal starting torque type and the much smaller floor space. (After all, floor space is expensive.)

The multi-cylinder type has a number of extras as standard equipment such as unloaded starting and capacity control and good balance which permits even upper floor mounting.

Its small sizes frequently make badly needed additions to already crowded engine rooms possible. If there is absolutely no space, the removal of one existing compressor gives ample room for multi-cylinder machines of much greater capacity.

Reliability of operation is difficult to evaluate as so much depends upon operating conditions. I know of a multi-cylinder booster which has operated over ten thousand hours with no attention other than occasional oil changes and inspections. Even with all our experience with both types, I honestly cannot today say which is more reliable.

The multi-cylinder machine being small and light can be very easily and quickly serviced. I have seen a broken valve ring replaced on a 125 H.P. machine with only a 30 minute shut down. And I have seen the pistons pulled and replaced and valves inspected by one man in about 2½ hours.

My opinion is that both types are good machines. I feel that the trend is to the multi-cylinder type.

When I first got into this business, there were no float controls, solenoid valves or thermal valves. The operator fed the ammonia to the coils with handset expansion valves. He would carefully watch his compressor and at the first indication of liquid coming over, he would scurry to pinch down on the offending valve. In those days liquid slopover was looked upon as an undesirable and dangerous condition which had to be carefully guarded against. Many operators today apparently do not realize that liquid slugs are undesirable and dangerous. I have seen compressors pounding so badly with liquid that I left the engine room in fear whereas everyone else apparently looked upon it as a normal condition, or at least something they could do nothing about. Let's see why liquid slopover is bad.

First of all, it cuts the plant capacity while the compressors continue to require full power. I have been asked to recommend what additional compressors were needed in cases where a careful checking of loads indicated an actual 50 per cent over capacity, yet slopover wasted so much refrigeration that there was not enough available to take care of the requirements.

When liquid strikes the hot piston and cylinder walls, at least a portion of it flashes into a gas. The compressor will handle that much less gas from the coils so you can see how the capacity can be cut way down.

Liquid washes the oil off the cylinder wall and causes wear. The pounding from heavy slugs imposes abnormal strains on bearings, pins, valves, etc. Hence it causes mechanical failures and shortens the life of the machine.

Liquid promotes oil pumping.

It may cause a dangerous explosion such as knocking a

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cylinder head off. The spring loaded safety head which is supposed to prevent this is not sufficient to avoid disaster in cases of extreme slugging. Some failures of even safety head machines have occurred.

If you have such a condition, by all means have a competent engineer recommend the best solution which may involve corrective measures to the offending evaporators, the installation of an accumulator with a liquid coil, a system of low side recirculation or a means of returning liquid from the accumulator to the receiver. You may well find that other difficulties are cleared up by eliminating liquid slopover.

How about hardening tunnels? The quick hardening effects quality by giving greater smoothness. Some operators object they do not want to make their product still smoother. I do not intend to argue about that but will confine myself to operational advantage. With a tunnel, the product is finished and need not go to the hardening room. Actually, loading direct from tunnel to truck is not very practical. Ordinarily, the labor is the same whether a tunnel is used or not assuming that the product is fed on or off the tunnel automatically. The operation of packing the individual packages into bags or boxes follows the tunnel hardening. It is still the same operation simply done at a later period.

Product from a tunnel may be stacked solid in the hardening room. As it has been fully hardened, no space for air circulation need be left. This permits much better utilization of space so that the tunnel is a solution for the plant that is bursting at the seams and that has no space to ex-

pand. If they do not have a tunnel, they can restack goods after hardening but this means expensive double handling.

Tunnels can be made much more compact than what has been customary in the past. With a compact tunnel, I can see no need for the -40° to -50° tunnel temperature as we can then much more economically allow a somewhat longer hardening time and higher air temperatures.

To attain temperatures of -40° to -50° large compressors are required and power requirements are high. Even if more moderate temperatures are used, the refrigeration plant must be large enough to do all the hardening at the rate of freezer production instead of spreading the load over 24 hours. The air blowers also take considerable power.

The Ice Builder

For the high temperature cooling load (above 32°F.) such as mix cooling, particularly if you also operate a fluid milk plant so that this load is quite large, I would suggest that you investigate the ice builder. That, of course, means that you will use ice water for cooling but if you use plate coolers, you need chilled water anyway. The ice builder usually reduces operating costs by reducing the size of the compressors and motor and hence the electric demand charge, and also because it operates at a relatively constant suction pressure, hence eliminates periods of partial load operation of compressors which are so wasteful of power. Due to its ability to handle tremendous overloads and the simplicity of control, the entire milk cooling operation is

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simplified. Many plants that have installed ice builders have found it convenient and economical to also utilize it for the air conditioning of offices and retail sales space instead of installing independent refrigeration equipment for this service.

I believe you are thoroughly familiar with the use of plate equipment and the high temperature short time pasteurization of milk. The regenerative circuit wherein the hot pasteurized milk is in heat interchange with the incoming cold raw milk saves materially on steam, cooling water and possibly refrigeration. It converts the batch method of pasteurization to a continuous process and thereby creates a steady demand for steam and refrigeration in place of the intermittent peaks. Plate equipment with regeneration is in successful use in the continuous production of ice cream mix. It is to be expected that this application of plate heat exchangers will find more wide-spread use for it possesses the same advantages in the production of mix as it has in the pasteurization of milk.

How about Freon instead of ammonia as a refrigerant? You are now using Freon in retail cabinets, in farm milk coolers, in air conditioning units and there are some ice cream plants using this gas. Freon is an excellent refrigerant. It is non-toxic, non-irritating, non-inflammable and functions at moderate pressures. It is therefore ideally suited for applications in public places where a panic hazard exists. It has almost completely captured that market as well as household refrigerators, deep freeze units, ice cream

cabinets, grocers and butchers boxes. Service men familiar with Freon are found almost everywhere.

When it comes to complex installations with long lines running to a multiplicity of evaporators, Freon has made little headway in displacing ammonia. There are a number of good reasons for this. While Freon is just as efficient, theoretically, as a refrigerant, and should, therefore, require no more power than ammonia, it is a very heavy and viscous gas and pressure losses in long lines will be quite large so that in practice the Freon plant does take more power. Its non-irritating property is likely to result in leaks going unnoticed whereas an ammonia leak will be promptly repaired to stop the irritating odor. In large complex plants with many joints the cost of Freon replacement is likely to be quite high.

Oil pumping is much more severe with Freon than with ammonia. This is usually no drawback as we have learned how to design evaporators and lines to return the oil to the compressors. It does, however, create some difficulty in parallel operation of compressors and particularly in attempting to operate a number of machines at different suction pressures and discharging into a common condenser. Ammonia compressors lend themselves better to complex plants of this kind with a number of machines interconnected for maximum flexibility.

This article is based on a paper presented during a Production meeting at the 1950 convention of the National Association of Retail Ice Cream Manufacturers, held in Washington, D. C.

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SODA-CANDY



Production Costs

from page 32

supplied the production superintendent regularly, costs for these services may take away real profits. Where water is purchased, the water bill is a good gauge of efficient use. A separate meter showing electric power consumption by refrigeration equipment is one way of measuring refrigeration costs. The electric meter readings provide an accurate indication of total plant usage. Fuel usage is easily obtained from fuel bills. All of these costs will vary from month to month. A monthly chart is the best way of keeping a check upon each one. These charts can be prepared for a period of one year, adding the values for each month as they are accumulated. By use of average values for previous years an index line can be shown for each item (power, fuel, water, etc.) by months for the year. By comparing the current year with the average or "norm," the production superintendent can easily see if he is operating satisfactorily. It is suggested that units be plotted instead of total cost of monthly bills to eliminate the effect of changes in rates from year to year. Usage is of more value here to the production man in gauging efficiency than total cost.

Supplies

The cost of supplies is another loophole for profits. Supplies are those materials which are expendable and which are not used directly in the product. Wastage frequently will go unnoticed for several months or years. Washing powder, insecticide, oil, and containers are examples. Frequent inventories, at least monthly, are the only sure way of watching supplies. Inventory changes can then be checked against production records. For example, the inventory charge to production for pint ice cream containers can be checked against production records of pints of ice cream to determine wastage and misuse.

Labor

Labor costs are more difficult to analyze because of the assortment of duties. One work simplification expert says that every job has three parts; first, "Make-Ready," such as setting up equipment, assembling supplies, etc.; second, "Do," such as actual freezing and packaging the ice cream; and third, "Put-Away" or clean-up. A time study on one job showed 50 percent of the time was "Make-Ready" and "Put-Away." Labor cost is second only to raw material cost, hence some measure of efficient use of labor is very desirable. One milk plant owner makes use of "Production per Man Hour" as one measure. In an ice cream plant the number of gallons of ice cream would be divided by the total production man hours worked (clean-up, mix making, freezing, etc.) to obtain a figure representing the production efficiency. This should be of great value in checking labor cost. This figure will vary from season to season but by knowing normal seasonal variations in a particular plant from previous years and showing them on a graph it is

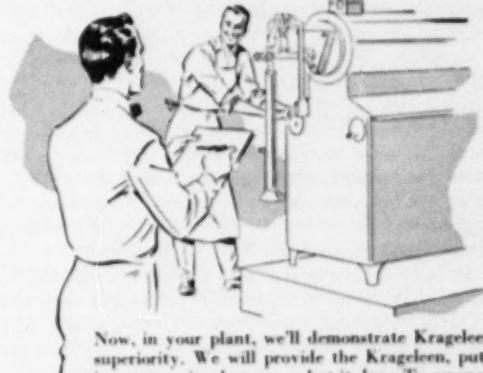
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possible to identify satisfactory and unsatisfactory performance.

Of course, sound judgment must be exercised in interpreting figures obtained in this way. Small package units and novelties will greatly reduce the gallonage production per man hour. Each plant would have to establish an individual standard of performance.

This brings us to the most important single cost item in manufacturing ice cream—the cost of the raw materials. The raw materials include dairy products, sugar, serum solids, stabilizer, flavoring, and any other ingredient used in making the product. Perhaps we should include air as an ingredient. We agree that a certain amount of air is essential in good ice cream. And the amount of air in ice cream has a great deal to do with the cost per gallon of the finished product. Besides the amount of air, the composition of the mix is an important factor. However, we can assume that management has already made a decision concerning overrun standards and composition standards for the plant, and the production superintendent must control costs by choice of materials and wise purchases.

Like labor costs it is necessary to reduce the ingredient cost to a unit value. The possibility of variable yield and the chance for product waste require the calculation of unit costs. This can be based most conveniently upon costs per gallon of finished product. A separate calculation is necessary for each mix composition and for each flavor. Flavoring materials are more expensive per pound than the mix; therefore, intelligent pricing must be based upon intelligent

cost analyses if even the cost of the flavoring is to be returned to the ice cream manufacturer.

The complete cost of the finished product requires some detailed but not difficult calculations. Two general steps are necessary. First, the mix cost per gallon must be calculated. The unit cost of each ingredient is multiplied by the quantity used. The total costs of each of the ingredients are added to obtain the total mix cost. This total cost is then divided by the total number of gallons manufactured. The answer is the cost per gallon. The second step is to calculate the cost of each flavor. To obtain this figure the cost of the mix used is added to the cost of the flavoring material used. This sum is divided by the number of gallons of ice cream obtained. The answer is the cost per gallon of finished ice cream.

These steps are best illustrated by an example. The following mix formula is for 12 per cent fat, 10 per cent serum solids, 15 per cent sugar, and 0.3 per cent gelatin:

24.0 lbs. cream at \$.3214/lb. (\$27.00 per		
40-qt. can of 40%)	\$7.71	
56.7 lbs. milk at \$.0370/lb. (\$3.70 per		
cwt., Class II, 4%)	2.10	
4.0 lbs. skim powder at \$.1575/lb.	.63	
15.0 lbs. cane sugar at \$.081/lb.	1.22	
0.3 lbs. gelatin at \$.071/lb.	.21	
100.0 lbs. (11 gallons)		\$11.87

The formula makes 11 gallons with a total ingredient cost of \$11.87. The ingredient cost per gallon is \$1.08.

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When vanilla ice cream is made, a typical freezing report is as follows: "Used 50 gal. mix and 30 oz. vanilla to make 92.5 gals ice cream." With mix at \$1.08 per gallon and vanilla at \$12.50 per gallon, the total ingredient cost is \$56.93. This total cost divided by 92.5 gallons gives \$0.615 cost per gallon of finished vanilla ice cream.

When strawberry ice cream is made, a typical freezing report is as follows: "Used 50 gal. mix and 30 qts. (71.25 lb.) of frozen strawberries to make 100 gal. ice cream." With mix at \$1.08 per gallon and frozen strawberries at \$0.33 per lb., the total ingredient cost is \$77.51. This total cost divided by 100 gallons gives \$0.775 per gallon.

There may be some question of the yield used in the above two examples. The overrun is the same on the basis of the mix alone in both examples. This is important if the body and texture of strawberry ice cream is to compare favorably with vanilla ice cream. Some operators take the same overrun on the flavored mix (mix plus strawberries) as on vanilla. This would be true where overrun standards are the same for all flavors as measured by an overrun cup or where filled container weights are the same for all flavors. If this were the policy, the yield in the example of strawberry ice cream would be 106.5 gallons instead of 100 gallons and the total ingredient cost of \$77.51 would be divided by 106.5 gallons to give \$0.728 cost per gallon.

Frequently it is desirable to calculate costs of ice cream in advance in production planning. This can be accomplished in the manner described above, substituting desired yields, prices, etc. When such costs are often needed, it

may be advantageous to construct tables or graphs to eliminate the burden of repeated calculations and likewise the possibility of error. Two years ago William J. Good reported on a graph or alignment chart which served this purpose. This chart permitted rapid calculation of mix costs per gallon for mix of a given composition when the price per pound is known for fat, serum solids, sugar and stabilizer. It saves considerable time in production planning.

Since that time these charts have been further improved so that they will apply under a variety of conditions. One chart takes into consideration the unit price and quantity of flavoring, the unit price of mix, and the overrun in the finished ice cream. Considerable time can be saved with this chart where extreme accuracy is not needed in figuring cost. Other charts have been constructed for other ranges of flavor costs and mix costs.

Conclusion

Regardless of the method used in arriving at costs, it is important that we be aware of costs and factors which bring about changes in costs because the profit margin is not sufficiently wide to permit ignoring costs for a very long time and still stay in business. Production costs are not always readily assessed but index values can be used in certain cases to keep them in line.

This article is based on a talk given October 12, 1950, during the 17th annual convention of the National Association of Retail Ice Cream Manufacturers, held in Washington, D. C.



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Time and Motion

from page 79

with plant processing was omitted. Only the daily routine cleaning operations were taken into account. Infrequent operations such as washing windows and walls were omitted.

The percentage of the total labor cost represented by cleaning labor in the three dairies was:

Dairy "A"	18.89%
Dairy "B"	20.01%
Dairy "C"	17.61%

These figures would vary a small amount according to the method of calculating plant labor, but the labor included in this analysis is that which is generally considered as the operational plant labor by most plant operators.

In general, the cleaning of any piece of dairy equipment was found to be accomplished by the following major steps:

1. Disassemble equipment.
2. Walk to hose station, turn on water and return to equipment.
3. Rinse milk remnants from equipment.
4. Return hose to station and turn off water.
5. Walk and pick up cleaning powder or cleaning solution, brush or sponge, and return to equipment.
6. Wash milk contact surfaces.
7. Wash equipment exterior.
8. Walk to hose station, turn on water, and return to equipment.
9. Rinse equipment.
10. Return hose, turn off water, return to equipment.
11. Assemble equipment.

Assembly and Disassembly

The percentages of the total cleaning labor represented by the assembly and disassembly operations were:

Dairy "A"	37.9%
Dairy "B"	42.8%
Dairy "C"	43.8%

The type of breakdown shown in the above table reveals some very interesting information on what happens within the cleaning operation. The fact that around 40 per cent of the total cleaning operation is involved in the assembly and disassembly of the equipment and pipe lines, shows very forcibly that no matter how efficient the actual washing operation is, large amount of time will be necessary for assembly and disassembly. Of course, this assembly and disassembly time can be reduced considerably by good motion economy, but there will be an irreducible minimum as long as the equipment is disassembled.

The types of dairy equipment that require large amounts of assembly and disassembly time are:

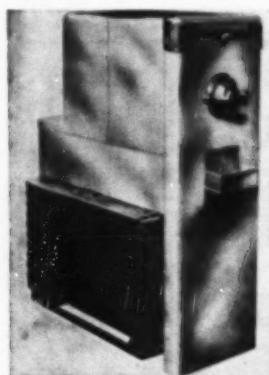
1. Sanitary pipe and fittings.
2. Separators and clarifiers.
3. Homogenizers.
4. Bottle fillers.
5. Positive displacement pumps.
6. Plate type heat exchangers with their mass of sanitary pipe lines and fittings.

In almost all cases in the above equipment, the assembly and disassembly time equals or exceeds the washing time. Of this type of equipment, the sanitary pipe and fittings require the most assembly and disassembly time. The fundamental steps in the assembly and disassembly of sanitary pipe and fittings are:

1. Loosen hexagon nuts with wrench.
2. Unscrew hexagon nuts.
3. Carry pipe sections and fittings to wash tank.
4. Carry pipe sections and fittings back to assembly position.
5. Place paper gasket.
6. Screw hexagon nut hand tight.
7. Tighten hexagon nut with wrench.

Some motion economy can be incorporated in assembly and disassembly of the hexagon nut but, at best it will only be a marginal improvement. The development of a quick coupling connection that will pass sanitary standards would be a great time saver on this operation.

In carrying the pipe sections to and from the wash tank inefficiencies exist which can be controlled. In some cases the sections are carried long distances to and from the wash



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tank. Sometimes the total number of trips almost equal the number of pipe sections and fittings. The use of pipe racks on wheels will result in a great reduction in pipe carrying time.

The equipment should be laid out in a manner that will keep sanitary pipe and fittings at a minimum. The pipe should be at a height that will permit assembly and disassembly without the aid of stools and ladders.

The dairy industry will need considerable help from equipment design engineers in order to reduce assembly and disassembly time a great deal.

Rinsing Operations

The percentage of the total cleaning labor represented by rinsing the equipment before and after washing was:

Dairy "A"	15.9%
Dairy "B"	10.3%
Dairy "C"	9.9%

The time spent in rinsing the equipment before and after washing represented from 10 to 16 per cent of the total cleaning time. This time is involved in rinsing the milk remnants free from the equipment and the removal of the cleaning solutions from the washed surfaces. The greatest amount of rinsing time is found in the rinsing of pasteurizing vats, cold milk storage tanks and, the slime from separators and clarifiers. The rinsing of the equipment reduces the time involved in washing but, whether this is the most efficient method might be open to some question. In any event, it is interesting to note that this much time is involved with a man holding a hose and rinsing equipment.

Washing Equipment Exteriors

The percentage of the total cleaning labor represented by the washing of the equipment exteriors was:

Dairy "A"	4.1%
Dairy "B"	5.7%
Dairy "C"	7.9%

The percentage of the total cleaning time represented by the washing of the equipment exteriors varied in the three dairies from 4 to 8 per cent. This is of some interest in that the washing of equipment exteriors does not have too great an effect on the product quality. I do not mean to imply that the exteriors should not be washed and kept

in a good eye pleasing condition, but I feel that the use of steam jet cleaning, using the Venturi principle would be of some advantage here.

It was interesting to note that in some cases more time was spent in washing the exterior surfaces of stainless steel vats than was spent in washing the milk contact surfaces. Also, more time was spent in washing the exterior surfaces of sanitary pipe than was spent in washing the interior surfaces.

Milk Contact Surfaces

The percentage of total cleaning time represented by the washing of the milk contact surfaces was:

Dairy "A"	31.7%
Dairy "B"	32.6%
Dairy "C"	30.2%

Less than a third of the total cleaning time is involved in washing the surfaces that come in contact with the milk.

Preparing Cleaning Solutions

The time involved in making up the various cleaning solutions represented from 5 to 8 per cent of the total cleaning time. This time is made up of getting washing powder, filling wash tanks and buckets, and mixing the solutions. The making up of the many buckets of cleaning solution consumes considerable time and, in addition, it is practically impossible to control the strength of the solution because of the human element.

Getting and Returning Hose

The time used to walk to and from the hose station and turn the water on and off represented from 2 to 2.8 per cent of the total cleaning time. The amount of time needed for this operation will of course vary with the number of times that the water is left running in the hose between operations. It was observed that the hose was left running in many cases.

Cleaning Aids

The recent introduction of glass pipe which is cleaned in place by circulatory methods and, the experimental cleaning of stainless steel pipe by the same method gives promise of considerable savings.

The amount of time required to disassemble, clean, and

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reassemble the sanitary pipe varied in the three dairies from 34 to 42 per cent of the total cleaning time. Since a large part of this time is involved in disassembly and reassembly, considerable savings are possible by the use of these methods.

The amount of savings possible by using these methods would depend on the amount of pipe that could be replaced.

A number of equipment companies devote almost their entire manufacturing output to dairy cleaning devices. All of this equipment is designed to make it possible to do a good cleaning job with the minimum amount of manual labor. Among these are:

1. Sanitary pipe and fittings racks and small parts tables. These are equipped with wheels which can eliminate much walking time.
2. Pipe and fittings wash tanks equipped with power driven solution fed brushes.
3. Separator and clarifier disc washers.

I would particularly like to call your attention to some of the cleaning aids recently developed by Mr. John R. Perry of the National Dairy Products Corporation.

1. The hot water generator which delivers water at 115° to hose stations strategically located about the plant—the hoses being equipped with shut off valves at the

nozzle end. This system will eliminate much of the walking time required in going back and forth to the hose station and turning on and off the water. Some savings in time is possible by this system but, of course the real benefit of this is in the elimination of the free running hose.

2. The central cleaning solution tank in which the general cleaning solutions are made up and then forced by air pressure through pipes to convenient locations about the plant. A portable unit of the same type is also used. This system eliminates the time consuming making up of cleaning solutions in buckets and, in addition, will save considerable cleaning powder.

3. The solution fed power driven pipe brush which has revolving brushes on both the inside and outside of the pipe enabling simultaneous inside and outside washing. A novel rinsing pipe is used that enables the rinsing of the pipe at the tank. It was found in the study that more time was spent on washing the outside of sanitary pipe than was required to wash the interior.

The use of time and motion study is a valuable tool in work simplification procedures and, it can be applied to most dairy operations. Basically it consists of recording the fundamental steps required in the completion of a task.

This article is based on a paper presented during the 1950 convention of the International Association of Ice Cream Manufacturers, held in Atlantic City, New Jersey.

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Lubrication Oils

from page 44

for servicing. Multiple stage compression of ammonia with intercooling between stages of compression is desirable in minimizing this source of oil in the system.

2. *Attention to Proper Lubrication.* In compressors using the splash system of lubrication, too high a level of oil in the crank case will result in excessive amounts of oil getting into the system. In compressors using circulating or force feed lubrication systems, the type of oil used is most important in controlling the amount of oil that will find its way into the system. Too light an oil, or excessive clearance in oil carrying bearings, may result in an excessive oil throw to the cylinders, resulting in some of that oil finding its way into the discharge.

3. *Compressor Operation.* There is usually some ammonia in the oil in the crank case of the compressor. If suction pressures are lowered rapidly, it will cause this ammonia in the crank case to boil, frothing up the oil, carrying it into the system through the equalizer. Sudden changes in suction pressure should be avoided.

4. *Maintenance of Equipment.* Worn piston rings, oval cylinders, or rings loose in the groove will allow a compressor to pump oil. Leakage of gas past pistons (blow by) builds up pressure in the crank case, causing oil to be carried back through the equalizer. Leakage of gas by upper rings in a double trunk piston atomizes oil in the suction space and this atomized oil is carried into the discharge.

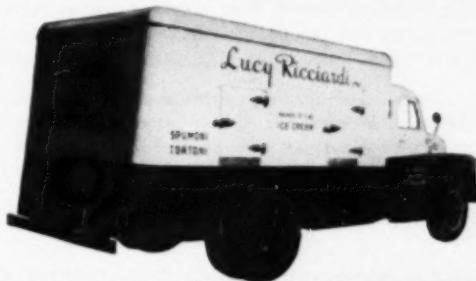
5. *Oil Traps.* For every gallon of oil that is added at the compressor, a gallon of oil must be withdrawn somewhere. Oil traps should be used in the system. Oil traps, if large enough so that the mixture in the traps can remain relatively motionless, will intercept larger particles of oil suspended in the gas, but cannot remove vaporized oil or descomposed oil, which is, in effect, molecules of oil dispersed through the refrigerant. Oil in this state can only be removed by distillation, which means that much of this oil will not be removed from the liquid ammonia until it has been distilled off in the evaporators. This oil will collect in accumulators and evaporators and should be drained regularly, in addition to the draining of all oil traps in the system.

In the above we have considered only the amount of oil in the system without any regard for the nature of that oil. The oil used in the compressor must obviously have properties that will assure lubrication of all mechanical parts of the equipment. In addition to the qualities required for compressor lubrication, the oil must have characteristics that will prohibit it from congealing at evaporator temperatures, will not permit it to break down under operating conditions to form gummy deposits in the system, and will drain readily from heat transfer surfaces. We have seen instances where we have been able to draw as much as a quart or more of oil from the accumulator of a continuous freezer without that oil having had any appreciable effect on the operation of the freezer, indicating that the oil though present in the system, drained readily and was not collecting on the evaporator surface. In other cases, we have seen serious oil trouble in freezers where we have only been able to draw a few ounces of oil from the accumulator at any one time. As all systems contain some oil, it appears that the nature of the oil in the system is more important than the amount of oil, within reasonable limits. It takes very little oil on the evaporator surface to materially decrease heat transfer.

To give some purely illustrative figures of how little oil it takes, we can consider that in a continuous freezer one pound of liquid ammonia will be evaporated for every gallon of ice cream frozen. In freezing 1,000 gallons of ice cream, 1,000 lbs. of liquid ammonia will have passed through the freezer refrigeration system, and if this oil contains only 1/100ths of 1% oil, 1.6 ounces of oil will be left in the freezer refrigeration system. If this 1.6 ounces of oil was distributed evenly over the evaporator surface of a 150 gallon an hour freezer, it would leave an oil film approximately .005" thick. The effect of this film of oil on heat transfer would be approximately the equivalent of trying to transfer heat through five inches of steel. In practice, this would never happen, but as an illustration it does give an indication of how little oil coating is needed on the evaporator surface to seriously affect operation. If the oil is the type that will drain freely from the surface, its presence in reasonable amounts is not serious and merely requires regular purging from the system. The characteristics we look for in this type of oil are as follows:

(Continued on next page)

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1. Pour Point. The pour point of an oil is the lowest temperature at which the oil will flow. In an ice cream plant, evaporator temperatures of 20 deg. below zero (3.6 lbs. back pressure) are not unusual and it is obvious that if the oil is to drain freely, it must have a pour point below that temperature. This means that the oil should have a pour point of at least 25 deg. below zero.

2. Flash Point. The flash point can be broadly defined as that temperature at which the oil begins to vaporize. As pointed out earlier, temperatures of 300 deg. and higher are not unusual in compressors under normal operation and can be higher under extreme conditions. The oil must have a flash point higher than the maximum temperature that will be reached in the compressor, or vaporized oil that is practically impossible to remove except by distillation will find its way into the system.

3. Use of Additives to Improve Natural Characteristics of the Oil. Various additives can be used in refrigerated oils to improve their properties. In some instances, pour point depressants have been used, although this practice seems to have been discontinued by many of the companies supplying refrigeration oils. At the present time, most of the oil companies are using naphthenic base oils dewaxed by solvent extraction, giving them required pour points without the use of additives. Foam inhibitors are used to minimize carry-over of oil through the equalizers. In some instances, rust inhibitors and wetting agents or detergents are used, which are probably beneficial in getting faster draining of oil from evaporator surfaces. Although there are many additional additives that could be used in lubricating oils, we believe the above cover those most generally used in ammonia refrigerating oils. It is very probable that in the future we will see greater use of additives in all lubricating oils to improve on natural characteristics and for specific operating conditions.

The importance of pour point was expressed above but only from the standpoint of the pour point of the oil used in the compressor. Actually, the pour point that we are interested in is the pour point of the oil that is found in the evaporator. We have seen many cases where the mixture of oil, water and other impurities drawn from the accumulator of an ice cream freezer will congeal at temperatures well above the evaporator temperature, even though the compressor oil used has a pour point of 25 deg. below zero or lower. A very quick check of the pour point of the oil from an evaporator can be made by putting a sample of that oil in the hardening room and cooling it down to the hardening room temperature. The oil used should remain fluid at the hardening room temperature. If the oil congeals at temperatures above the evaporating temperature, it will gum up in float valves and other operating parts, causing them to be sluggish in operation or to completely fail. The oil will also coat the evaporative surface, causing a gradual drop-off in the capacity during the day's run.

When oil in the evaporator congeals at temperatures above the pour point of the oil used in the compressor, it

indicates that other impurities in the system are affecting the pour point, or that the oil has broken down and is partially oxidized or carbonized. Common impurities in the system that will affect the draining of oil from refrigerated surfaces are moisture and dust or dirt in the system. Moisture in the system will form an ammonium hydroxide, which in turn has an emulsifying effect on the oil. This emulsion will be slower to drain from the evaporator surface and may reduce the capacity of operation during the day's run, but usually heating the evaporator surface at the end of the day's run will permit the oil to drain to the low point in the system from which it can be purged. To control oil difficulties, it is important to keep moisture in the system at a minimum.

Dust or dirt in the system is also a factor that will affect difficulties experienced with oil in the system. Oil is naturally a good wetting agent, in fact, a much better wetting agent than water. A drop of oil on a piece of cloth will spread much faster than a drop of water. This means that oil in the system will wet dust or dirt that may collect on the evaporator surface, forming a heavy film that will not drain, requiring actual cleaning of the surface. It is very important that the entire system be kept as free as possible of dust and other solid impurities.

Broken down oil in the system is the most serious offender and when deposits of broken down oil and other impurities collect on the evaporator surface, these can only be removed by solvents. As stated earlier, carbon deposits on the compressor pistons indicate that oil is broken down in the compressor. The importance of controlling gas discharge temperature and using an oil with a high flash point has been stressed. In some respects, it seems that the flash point of the compressor oil used is even more important than the pour point. We know of one plant where considerable oil trouble was experienced even though they were using a compressor oil with a low pour point. A change was made in the oil, going to one with a flash point of 440 deg., which was considerably higher than that in the oil previously used, but with a pour point of only zero to 10 deg. below zero. It is also believed that this oil may have contained an additive which improved its wetting ability. In spite of the high pour point, this oil gave less trouble at low evaporating temperatures, drained freely from evaporator surfaces and materially helped to clean up the system. A similar oil with a lower pour point is available and probably should have been used in this installation, but the interesting thing is that in this particular case the higher flash point seemed to be more important than the low pour point.

Control of oil in ammonia refrigeration systems requires the use of a compressor oil that has all the characteristics necessary for complete lubrication of that equipment, plus proper maintenance and operation to minimize the amount of oil that will find its way into the system.

This article is based on a talk given during the October convention of the International Ass'n. of Ice Cream Manufacturers.

New Products

RECO REACH-IN



Reco Products Division of Refrigeration Engineering Corporation has announced the addition to their line of a thirty-one cubic feet Frosti-Vault Reach-In.

Known as BSM-31, this addition to the line is designed to meet a market requirement for a backroom frozen food storage cooler or an ice cream holding or hardening reach-in cabinet.

Model BSM-31 is of metalply construction inside and outside. Metalply is an exclusive product of RECO and is fabricated in their own plant from aluminum sheet permanently bonded to rigid plywood.

Model BSM-31 will hold 900 pounds of frozen foods or 90 gallons of ice cream. Additional information is available on request.

"CUBANANA"

Limpert Bros. Inc. has developed a new flavor known as "Cubanana" for use in ice cream. This new product, first intro-

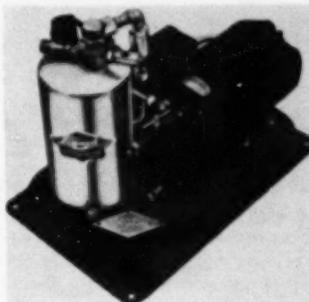
duced at the Dairy Industries Exposition in Atlantic City, is said to impart a banana flavor of high quality to the ice cream.

Additional information about "Cubanana" may be had on request.

ATOMIC CARBONATOR

The Liquid Carbonic Corporation announces the new Atomic Carbonator that employs a new principle of instantaneous triple action carbonation.

The heart of the new Liquid carbonator is the aspirator. A conical nozzle delivers a water jet, at over a mile a minute velocity, into the open end of a gas filled cone. CO₂ gas is entrained in the water in minute bubbles and with high agitation, resulting in instantaneous carbonation. From the outer cone the bubble filled stream plunges into a cup with further entrainment of gas and violent agitation.



There is no waiting for slow surface absorption of gas into the stored water, no need for a large tank, since carbonation is complete in one pass through the aspirator system. The capacity of the carbonator is the capacity of the pump and motor supplying water. There are no

moving parts, nothing to get out of order, says a company spokesman.

Literature is available on the new carbonator and may be had by writing to the Liquid Carbonic Corporation.

HILLSON NUTS

4

Nuts for fountain and general use are now being made available in vacuum packed tins by the Hillson Nut Company. Robert E. Hillson, President of the firm and a veteran of seventeen years in the nut industry, states that this new packaging technique brings the nuts to the user in a fresher, more attractive condition.

"All Fancy" nut toppings are currently available in one pound tins. The tins are decorated in five colors and illustrate the product in use. Nuts in smaller four-ounce jars are also available for carry-out sales.

Additional information and literature are available on request.

WISNER DAIRIGRAM

5

The Wianer Manufacturing Corporation has recently published its first issue of the "Wisner Dairigram," a house organ that describes various developments in the field of equipment, supplies and service for the dairy and food industries. Copies are available on request.

STABILIZED FRUITS

6

Southern Packing Company is now packing its line of frozen fruits with stabilizer added, in addition to maintaining its regular products, according to an announcement by William E. Lamble, Jr., an executive of the firm.

Information about the use of the variety of frozen fruits is available on request.

INFORMATION PLEASE

Your Firm Name

Address

Your Name

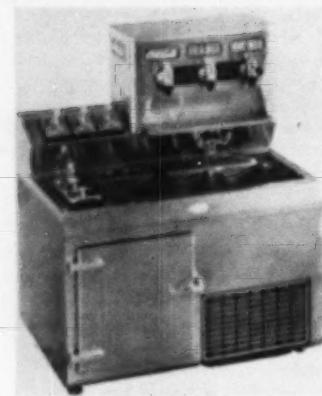
Your Title

To New Products Department,
Ice Cream Field
19 West 44 Street
New York 18, N. Y.

I would like to know more about the following New Products mentioned in the November issue.

(Print Identifying Numbers)

SPEEDSERV



The Everfrost Speedserv has been introduced by Anderson & Wagner, Inc. The firm manufactures Everfrost soda fountain equipment. The new unit is now available as a standard unit in the Everfrost line and is available at Everfrost dealers throughout the nation.

The Speedserv collects three soft-drink dispensers in one unit, reportedly eliminating the necessity for three individually iced drink dispensers. In addition, the larger capacity syrup storage of the Speedserv permits service of more drinks without the necessity for replenishing the syrup supply.

Further information may be had by writing to Anderson & Wagner, Inc.

DOUBLE RIPPLE

8

The Balch Flavor Company has developed what it calls the "Double Ripple" for use in ice cream to add eye and taste appeal. The idea is to produce unusual colors in ice cream by blending, for example, pineapple and chocolate ripples in vanilla ice cream to create orange and

brown colors. Gay red and green holiday colors can be produced by using pineapple and cherry ripples in vanilla ice cream.

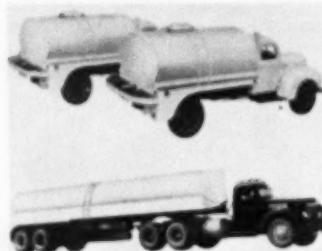
The company points out that any desired color may be achieved by the appropriate selection and combination of ripple flavors.

Sales help and proper equipment for manufacturing the "Double Ripple" are offered, and may be had on request.

MOJONNIER TANKS

9

Mojonniere Bros. Company announces a full line of stainless steel truck and transportation tanks to meet requirements of the dairy industry as well as the bulk hauling of other liquid food products. Plans have been completed to combine Mojonniere engineering with the production facilities of Stainless & Steel Products Company, Inc., pioneer manufacturers of this type of equipment.



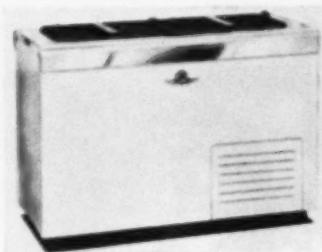
C45 CABINET

10

A small self-contained ice cream storage cabinet with large storage capacity is now being manufactured by Ace Cabinet Corporation for store keepers with limited floor space.

A single row type, it occupies 20 $\frac{1}{4}$ " in width. Special insulation features permit a 15 gallon capacity yet the overall length of the cabinet is only 53 $\frac{1}{8}$ " long and 34 $\frac{1}{8}$ " high. The construction material

is basically heavy gauge rust-proofed steel with a one piece stainless steel top. The body is finished in baked enamel.



Hermetically sealed condensing unit requires a minimum of attention. The kick-plate is perforated to allow maximum ventilation for the air cooled condensing unit. The four lids are of the "lip-flop" type with flexible hinges.

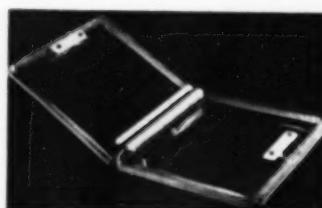
"HI LID"

11

R. K. Merritt & Associates announces that the "Hi Lid" now has a "new look."

It now has white plastic trim with gray Neoprene hinge and gasket which color combination heightens the appeal of the clear plastic in this transparent cabinet lid.

This "new look" also incorporates a new improved hinge assembly and a new edge gasket which insures a tighter fit on the cabinet, according to the manufacturer.



HOOTON
CHOCOLATE FLAVORCOAT
Made with CHOCOLATE LIQUOR
better taste for ice cream bars and novelties
HOOTON CHOCOLATE COMPANY NEWARK 7, NEW JERSEY



Hudson's
VANILLAS
Hudson Manufacturing Co.
Vanilla Products
EST. 1885
119 NORTH UNION AVE., CHICAGO 6, U.S.A.
Finest Vanillas for Over 60 Years



BACTERIA TEST KIT

12

TOWN MODEL "AS"

14

Ice cream making equipment and containers can be checked for sanitation and general cleanliness by use of a test for detecting bacteria on any wet or dry surface, which has been announced by the Belfer Laboratories. The new Belfer test not only indicates the presence of contamination but can be used to locate the source of bacteria, according to a spokesman for the organization.

The Belfer Bacteria Detector Kit consists of a stand, sterile swabs, sterile water and sterile bottles containing a gelatin-like agar substance. No special training or laboratory facilities are required to make the tests. The user simply swabs the surface to be tested, wipes the swab on the agar in a bottle, and then seals the bottle. If bacteria are present on the tested surface, spots will appear on the agar in one to three days. These spots are bacteria colonies and their number permits the amount of contamination to be readily judged.

Additional information is available on request.

"CROWN-O-FRUIT"

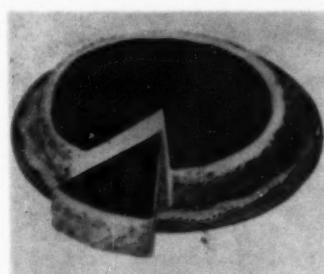
13

S. Gumpert Company, Inc., has introduced the "Crown-O-Fruit" ice cream cake, and reports that visitors to the firm's booth at the Atlantic City Dairy Industries Exposition in October were enthused about the new product.

The "Crown-O-Fruit" ice cream cake is a circular mold of ice cream, with a hollow top. Into this depression is poured strawberry, raspberry, cherry, pineapple, or chocolate fudge. A tasty crutch is sprinkled on top of the cake, and it is ready to package.

The Gumpert organization noted that a point in favor of the novelty is its year-round appeal. It will sell as well in winter as in any other part of the year, it was claimed.

Additional information about this product may be had on request.

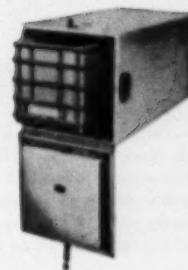


ICE CREAM FIELD, November 1950

Town Equipment Company reports several improvements in its Model "AS" insulated ice cream container.

Said to be ideal for retail deliveries of ice cream, this model has been designed to give long service. Inside construction consists of an air and water-tight metal galvanized liner. Outside construction is of aluminum or metal-painted aluminum, also air and water-tight. Its capacity is forty quarts of ice cream.

Wire baskets which facilitate flavor selection and loading, and eliminate dry



ice handling can be made to fit into these containers.

ZEROLLMFG. U.S. PAT. OFF.
ICE CREAM DIPPER

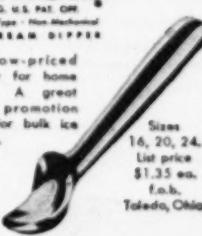
The high speed commercial dipper. Completely self-defrosting. Releases portion instantly when touched to dish.



Sizes
12, 16, 20,
24, 30.
Price \$2.40
each f.o.b.
Toledo,
Ohio.

NUROLLMFG. U.S. PAT. OFF.
Domestic Type - Non-Mechanical
ICE CREAM DIPPER

The low-priced dipper for home users. A great sales promotion item for bulk ice cream.



Sizes
16, 20, 24.
List price
\$1.35 ea.
f.o.b.
Toledo, Ohio.

BULKROLLMFG. U.S. PAT. OFF.
Non-Mechanical Heavy Duty
ICE CREAM DIPPER

A giant dipper for Bulk-dipping ice cream from bulk into hand-packed pints and quart. Checks compression losses in hand-packing.



Price
\$1.50 ea.
f.o.b.
Toledo, Ohio.

TRANSFER SPADE
A Zeroll Product

A strong, perfectly balanced tool for transferring ice cream from one bulk container to another.



Price
\$1.50 ea.
f.o.b.
Toledo, Ohio.

**Order Your
1951 Dippers
Now!**

While we still have an ample inventory we cannot guarantee future delivery of Zeroll and Nuroll ice cream dippers.

Today every ounce, every movement, every minute counts for profit or loss in ice cream retailing. You avoid waste of ice cream, time, labor and contamination by Roldipping with a Zeroll. Estimate your 1951 needs and provide now for the dippers you will need.

**Boost Bulk Sales
with Nuroll Deal**

Sell a Nuroll Dipper, a box of cones and a half-gallon of cream—or other combination with the dipper and watch bulk sales grow.

We supply display card, mats for newspaper and hand bill, recipe leaflet free in limited quantity. The housewife likes the fine quality, high utility Nuroll Dippers. She doesn't need a better one. You can't afford to give her an inferior one. Write for quantity prices.

Roldip is a coined word suggestive of the manner with which the Zeroll, Nuroll and Bulkroll Dip-

pers cut and roll the portion without compression, waste, nor contamination. It's so easy to Roldip—makes servers happy.

THE ZEROLL COMPANY
2410 Robinwood Ave., Toledo 10, Ohio
Copyright 1950 The Zeroll Company

PLASTIC DIPPER**15**

The Zeroll Company has introduced a new plastic Nuroll dipper—#20 size—for use as part of special dealer promotions. The comparatively low cost of materials made from plastic is expected to enable extensive participation in merchandising programs developed by the scoop firm to encourage home consumption of ice cream. Details are available on request.

LE ROY LINE**16**

Hy Badner, President, and Leo Overland, Vice-President, of Le Roy Foods, Inc., have announced that the firm now has available a complete line of equipment and supplies for the manufacture of frozen confections, including molds, bags, sticks, flavors, etc. This line will be available without any tie-ins or royalties required, it was said, and in addition, will be backed by an extensive premium and merchandising campaign.

Additional information and literature describing the new line may be had on request.

FLAVOR SLIDES**17**

The Hopp Press, Inc., specialists in price marking systems, has announced a

new item called "Reverso" (laminated ice cream flavor slides) for the ice cream dealer's store. These reportedly permit the dealer to display on a bulletin board any number of seventy-five standard or special flavors.

The laminated plastic slides display the flavor name in white on a red background—a combination that is said to be clear and visible to the customer. Slides are 8 in. wide by 1½ in. deep.

Information is obtainable from the Hopp Press, Inc.

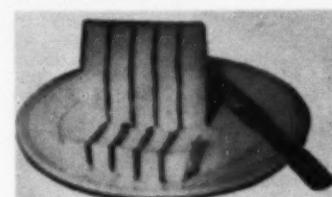
WESTONE**18**

Westone, an antiseptic floor treatment with bacteriostatic properties, has been developed by the West Disinfecting Company.

Formulated primarily for the treatment of floors, antiseptic Westone is now being used in manufacturing, jobbing and retailing establishments on tables, shelving and other equipment to reduce janitorial expense, merchandise spoilage, and to achieve cleaner, brighter, and dust-free atmosphere.

The West company reports Westone has had more than a year's field testing,

on a large commercial scale, in all types of buildings and institutions and industrial plants. Thorough-going techniques for application of the liquid have been perfected.

"NORTHPOLEON"**19**

Empire Biscuits Division has introduced a new novelty dessert which the firm calls the "Northpoleon." This is an ice cream layer cake made with Empire wafers. It is manufactured with the aid of a filling attachment that reportedly simplifies production.

The organization reports that reaction at the recent Dairy Industries Exposition to the "Northpoleon" was favorable. Additional information about this product and methods of manufacture, as well as sales aids can be had on request.

STAR OF THE SHOW*



Here's the refrigerated body that was the "Star of the Show" at Atlantic City last month. A new lightweight ALL-ALUMINUM beauty, built with the knowledge born of years and years of experience for rugged and efficient performance.

We wish to thank all our old friends and the host of new friends who stopped to admire the newest in All-Aluminum refrigerated bodies. Our organization stands ready to fulfill your most exacting refrigerated body requirements.

Pioneers In All-Aluminum Structure

BARRY & BAILY CO.

2421 North 27th Street

"Since the Days of the Covered Wagon"

Philadelphia 32 Pa.



Mix Group Hears Howard Grant; Southerners to Convene

THE fourth annual convention of the National Ice Cream Mix Association was held in Atlantic City's Hotel Chelsea on October 19.

Howard B. Grant, Publisher of ICE CREAM FIELD, was the featured speaker at the morning session. His talk on "A Positive Approach to Ice Cream Sales" followed the President's Address of Welcome (by A. P. Zepp, Alma Dairy Products Association, Alma, Wisconsin) and a report by Executive Vice President E. L. Koepenick.

Mr. Grant stressed the importance of the mix manufacturers' role in influencing ice cream manufacturers to adopt progressive merchandising policies. He pointed out several original techniques currently being employed by alert ice cream manufacturers throughout the country to stimulate sales. He urged also that the mix manufacturers be on the alert for imaginative ideas to introduce to their customers which will result in increased business for all concerned.

Don Anderson, Deputy Director, Dairy Branch, Production and Marketing Administration, United States Department of Agriculture, discussed "What the Dairy Program May Be in 1951" at the luncheon.

During the afternoon session, Dr. Paul H. Tracy, University of Illinois, analyzed the "Relationship of New Ingredient Developments to Food and Drug Findings Based on 1942 Hearings."

This was followed by an open panel discussion of "Soft Ice Cream." Harvey Swenson of Sweden Freezer Manufacturing Company and Gorman Prince, Alexandria Dairy Products Company, Alexandria, Virginia, served as co-chairmen of this phase of the program.

Don Hansen of the Rochester Dairy Cooperative, Rochester, Minnesota, issued the Treasurer's Report, after which Mr. Zepp concluded the 1950 convention with a Farewell Address in which he urged greater participation in association affairs.

All officers of the association were re-elected for an additional year. In addition to Messrs. Zepp, Koepenick, and Hansen, this includes Henry Kohler, First Vice President; Ed. H. Watson, Second Vice President; L. S. Hollinger, Third Vice President; and James Burke, Secretary.

Southerners to Meet in Florida

PALM Beach, Florida, will be the scene of the 1950 convention of the Southern Association of Ice Cream Manufacturers, to be held from December 4 to 7 at the Hotel Palm Beach Biltmore.

Monday, December 4, will be devoted to registration, the Past President's Dinner, a buffet dinner, and Tropical Night—a program of entertainment and dancing.

After Bryan Blalock, Southern Association President, calls the meeting to order on Tuesday, December 5, Governor Fuller Warren will issue an address of welcome. Talks by Fen Duscher, Lily-Tulip Cup Corporation, New York City ("Sales"); James Shipley, Abbotts Dairies, Philadelphia ("Costs"); Col. E. F. Brown, National Dairy Products Corporation, New York City ("Public Relations"); and Alf R. Nielsen, Alfar Creamery Company, West Palm Beach, Florida ("Dairy Industry in Europe"); will follow.

Speakers at the second business session, on December 6, will include Robert Hibben, International Association of Ice Cream Manufacturers; Owen Richards, American Dairy Association; George Hennerich, Ice Cream Merchandising Institute; and C. F. Hawkes, Armstrong Cork Company. The subjects to be covered include "The Dairy Industry" and "Pension Plans."

A feature of the final business session, on December 7, will be a talk on "Dairy Equipment" to be given by Charles M. Fistere, attorney and Executive Secretary of the National Association of Dairy Equipment Manufacturers.

Mr. Nielsen, Past President of the association in a pre-Convention statement, urged "everyone in the ice cream business" to attend the conclave.

He pointed out that "it is only as an industry that we will be able to meet and solve the problems that we have facing us . . . (these can be solved) only by each and every one of us getting together, discussing the details of these problems in our various communities, and learning from each other what is the best way to meet the situation."

A New Taste Thrill

★ BUTTER TOASTED ALMONDS

Taste Tempting Goodness

★ BUTTERED PECANS

Deliciously Different

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THE CHARLES A. PETERSON COMPANY
1127 SPRUCE STREET
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CHOCOLATE FLAVORS
COCOAS

The Greatest Taste
in Chocolate

LAMONT, CORLISS & COMPANY

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Branches in Principal Cities

ICMI School Term Ends

The first 1950-1951 Training School has recently been completed at the headquarters of the Ice Cream Merchandising Institute, Washington, D. C.

"This marks the beginning of our fourth year of putting on these schools for the ice cream industry," says G. W. Hennerich, Managing Director. "Response from ice cream companies makes us feel sure that the style of the school and our manner of presenting subject matter are in line with what the industry needs."

"When companies who have sent one man, send another and another—sometimes many more men to us, it is the best commentary on the school's usefulness we could receive. This happens all the time in the schools."

Remaining schools on the Institute's schedule in which there are openings are: November 20 thru December 1, 1950; January 8 thru January 19, 1951; January 29 thru February 9, 1951; February 19 thru March 2, 1951; and March 5 thru March 16, 1951.

Montana Course Set for November

The 14th Dairy Industry short course, to be held at Montana State College, Bozeman, November 13 to 16, will include noted guest speakers on problems in both dairy production and products fields, according to Dr. J. A. Nelson, head of the college dairy industry department.

Among the out-of-state speakers will be Dr. L. K. Crowe of the University of Nebraska; Professor W. J. Caulfield of Iowa State College; Dr. T. I. Hedrick, U. S. Department of Agriculture; Dr. H. A. Herman, University of Missouri; C. A. Abele, Diversy Corporation; and C. B. A. Bryant of Johnson and Johnson, Inc.

Dr. Crowe will discuss "Extraneous Matter in Churning Cream," "The Ice Cream Shrinkage Problem," and "Problems to be Concerned About in the Dairy Industry." Professor Caulfield will talk on "Some Factors Affecting the Quality of Ice Cream," "A Quality Control Program for Milk Plants," and "Cottage Cheese Production."

Further information about the course may be obtained by writing Dr. Nelson at the Dairy Industry department, Montana State College.

Penn State Plans 2 Courses

Two ice cream courses will be given this winter at The Pennsylvania State College. The course given for dairy equipment and supply men will be from December 4 to December 9, 1950. This is a one week course in the manufacture of ice cream and deals with composition of ice cream, ingredients used, standardization of acidity, calculations of the ice cream mix, processing the mix, flavoring and freezing ice cream, along with overrun and such subjects as hardening of ice cream and the manufacture of ices and sherbets.

The ice cream short course for plant men is from January 15 to January 27, 1951. This is a regular two weeks course and will include such subjects as composition of ice cream, ingredients used in ice cream; sugar, syrups, etc. Testing of ice cream by the Mojonnier and modified Babcock methods is given along with testing of milk and cream for butterfat and acid. Calculations of the ice cream mix are covered in considerable detail along with restandardization of off batches.

Processing of mixes, pasteurization, the manufacture of sherbet and ices, the use of various stabilizers, freezing of mixes with batch and continuous freezers, defects in ice cream, sherbets and ices, are also covered.

At the conclusion of the two weeks short course there will be a one day ice cream conference. This will be held on January 26 at which time a program of interesting subjects by expert lecturers from the industry will be held. The annual short course banquet is also held that night.

The enrollment for the supply and equipment salesmen short course is limited to 50 members. The enrollment for the two weeks ice cream course for plant men is limited to 60. Applications are handled in the order in which they are received, and should be made to A. L. Beam, Director of Agricultural Short Courses, The Pennsylvania State College, State College Pennsylvania.

St. Louis Society Active

The Dairy Technology Society of Greater St. Louis holds regular monthly meetings on the third Tuesday of each month at 7 P.M. in the Hotel Mark Twain, St. Louis. Dinner, a business meeting, and a guest speaker are customary program highlights, according to an announcement by Oliver W. Hickel, Warner Jenkinson Manufacturing Company.

Massachusetts Courses Planned

A series of short courses in the dairy field will be given at the University of Massachusetts in 1951. Of interest to ice cream men are two of these: one is an ice cream making course, elementary in nature, to be given from January 22 to 26; the other is an advanced course in ice cream making and is scheduled for January 29 to February 2.

Virginians to Convene in January

The annual convention of the Virginia Dairy Products Association is scheduled for January 16 and 17, 1951, at the Hotel John Marshall, Richmond, Virginia. The announcement was made by Vice President E. B. Campbell at Lynchburg.

NAMA to Hear Dr. Duncan

One of the foremost marketing experts in the country, Dr. Delbert J. Duncan, Professor of Marketing, Cornell University, Ithaca, New York, will headline the opening program of the annual convention and exhibit of the National Automatic Merchandising Association. The all-vending show is scheduled for the Palmer House, Chicago, November 12 to 15.

Long a student of the various phases of retail distribution, Dr. Duncan will give vending operators an outlook on the future of automatic merchandising. His talk will be an important part of the over-all N.A.M.A. convention theme, namely, "Vending's New Crisis," in that he will advise operators on the best course to follow during the present economic situation.

The 1950 N.A.M.A. convention program will get under way on Sunday morning, November 12. Plans call for the 15th annual business meeting of the association followed by talks by Dr. Duncan and John W. Mock. Mr. Mock, Chicago, independent management consultant, has chosen for his subject: "Mr. Automatic Merchandiser: Are You Running Your Business or is Your Business Running You?"

Formal opening of the annual N.A.M.A. exhibit will take place following the morning program. To date more than 125 firms have signed contracts to display at the 1950 vending show.

Wisconsin Conclave Scheduled

The joint conventions of the Wisconsin Association of Ice Cream Manufacturers, the Wisconsin Milk Dealers Association, and the Badger Flyers (supply men) will be held at the Hotel Schroeder, Milwaukee, from December 5 to 7.

At recent elections, all of the officers of the Badger Flyers were re-elected. These are Harry E. Fronhaefer, Liquid Carbonic Corporation, Chicago, President; H. C. Schranck, H. C. Schranck Company, Milwaukee, Vice President; E. H. Bokelkamp, Illinois Baking Company, Chicago, Vice President; Edward J. Waltzer, Mission Dry Corporation, Los Angeles, Treasurer; and H. E. Stinchfield, Bloomer Bros. Company, Newark, New York, Secretary.

Much of the entertainment at the joint conclaves will be provided by the supply men's organization. In addition, the Flyers will hold open house on the evenings of December 5 and 6.

Merchandising Plus!

Scores of clever merchandising techniques are described in a special pamphlet called: "An Idea Is Born—100 Years Old." It's a program designed to stimulate sales in 1951—the Ice Cream Centennial. If you haven't received your FREE copy, write now to ICE CREAM FIELD, 19 West 44 Street, New York 18, N. Y. We'll be glad to send you one.

Minnesota Convention Set

The Hotel Nicollet in Minneapolis will be the scene of the joint conventions of the Northwest Association of Ice Cream Manufacturers, the Milk Dealers, and the Minnesota Gophers (supply men's organization) from November 27 to 29. Entertainment will be provided by the Gophers, according to Secretary H. E. Stinchfield, Bloomer Bros. Company, Newark, New York.

Hoye Heads Empire Flyers

At the annual meeting of the Empire Flyers, held in September in conjunction with the convention of the Association of Ice Cream Manufacturers of New York State, T. E. Hoye, Savage Arms Corporation, Utica, New York, was elected President of the supply men's organization. Walter Parsonson, D. Michael and Company, Philadelphia, was named Vice President; John Morey, Wood & Selick, Inc., New York, Treasurer; and Sumner Bates, Lamont, Corliss and Company, New York, Secretary.

ANNUAL SCHOLARSHIP granted by the Chicago Dairy Technology Society to a second semester sophomore in Dairy Technology at the University of Illinois was won by Thomas O. Manees of Chicago. The award carries a stipend of \$200. The winner of the Society's \$400 scholarship to a high school senior for 1950 was John M. Jesus, Chicago. Shown in the picture from left to right are Professor P. H. Tracy, who is in charge of the Dairy Technology Division at the University of Illinois; Mr. Manees, and Roy Robichaus, President of the Chicago Dairy Technology Society.



AMBROSIA CHOCOLATE COMPANY • MILWAUKEE

Illinois Plant Group to Meet

The annual meeting of the Illinois Dairy Plant Quality and Efficiency Improvement Association will be held at the Union Building on the campus of the University of Illinois, Urbana, November 16 and 17, according to James Barracks of the Hudson Dairy, Urbana, Illinois, President of the Association. An educational program covering such subjects as the best delivery system for the small operator, laboratory control for the small plant, modern dairy plant cleaning operations, new equipment, war impacts, paper prospects for the small plant, new ideas in glass milk containers, dairy bars, economy in buying and common dairy plant manufacturing problems has been announced. The banquet will be held the evening of November 16. Dr. R. M. Nolen, Professor of Economics at the University of Illinois, will be the speaker. According to President Barracks, all those interested in the problems of the small operator are invited to attend this meeting.

Dr. Hankinson on "Costs"

Dr. D. J. Hankinson of the University of Massachusetts was the principal speaker at the October 12 meeting of the Maryland-D. C. Dairy Technology Society. The meeting was held in the Hotel Continental, Washington, and was attended by 100 persons. Dr. Hankinson's topic was "The Cost of Ice Cream Manufacture."

Dr. Paul H. Tracy of the University of Illinois was the speaker at the November 8 meeting of the Society, held at the University of Maryland.

Sanitarians Elect Dr. Weckel

Dr. K. G. Weckel, Professor of Dairy and Food Industry, University of Wisconsin, Madison, was elected President of the International Association of Milk and Food Sanitarians at its 37th annual meeting, held at Atlantic City, October 13 to 17, in conjunction with the Dairy Industries Exposition. Other officers elected were: H. L. Thomasson, Indiana State Board of Health, Indianapolis, President-Elect; H. J. Barnum, Bureau of Health and Hospitals, Denver, Colorado, First Vice-President; John Faulkner, U. S. Public Health Service, Washington, D. C., Second Vice-President. The retiring President is Dr. Milton Fisher, Department of Public Health, St. Louis, Missouri.

The next meeting (1951) of the Association will be held September 26 to 29 at Glenwood Springs, Colorado. The Secretary of the Association is George West, Department of Health, Rochester, New York.

Purdue Schedules Short Course

Purdue University's Dairy Department will offer an eight-weeks short course in dairy manufacturing beginning January 3, 1951, and continuing until February 23. Seven courses related to the processing of milk, ice cream, butter and milk products, milk testing and dairy bacteriology will be included. Additional information may be had by visiting to V. C. Freeman, Associate Dean of Agriculture, Purdue University, W. Lafayette, Indiana.

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Refrigerated Bodies



Incorporate that which Is Best in

Design

Convenience

Construction

Self-Contained—Dry Ice—Ammonia

Let Us Quote



REFRIGERATING EQUIPMENT CO., INC.

128-36 Forty-Fourth St. Union City, New Jersey

"Serving The Better Buyers"

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people

KOLD-HOLD NAMES T. O. LESTER

In announcing the appointment of T. O. Lester to the post of Sales Assistant of the Power Take-Off division of the Kold-Hold Manufacturing Company, Lansing, Michigan, J. R. Tepfer, General Sales Manager, disclosed the company was about to introduce a new compressor powering unit for trucks.

Although details of the unit are being kept secret until the sales organization for this division is complete, the naming of Mr. Lester to the sales post indicated development is well on its way.

NEW REPRESENTATIVES FOR GUMPERT

S. Gumpert Company, Inc., Ozone Park, New York, has announced the appointment of four new sales representatives.

Walter C. Busch, 358 Hillside Avenue, Webster Grove, Missouri, will cover eastern Missouri.

L. C. Williams, 711 Admiral Boulevard, Kansas City, Missouri, will handle Oklahoma and Arkansas.

R. T. Penley, 1210 Throop Street, Topeka, Kansas, will be in charge of the Kansas territory.

Jack M. Ostin, 3411 Larona Avenue, Cincinnati, Ohio, is assigned the western Ohio area.

ED HANSON GOES TO WHIRLA-WHIP

Ed O. Hanson has been named district sales manager of Whirla-Whip Inc., 460 Noeth Dale, St. Paul 3, Minnesota. Mr. Hanson was formerly connected with Vander Bee's Ice Cream Company, St. Paul, and is a past President of the Northwest Association of Ice Cream Manufacturers.

MR. ERNST, JR., IS WED

J. Jack Ernst, Jr., of Pennco, Inc., Philadelphia, was married September 9 to Elizabeth Ann Doyle of Elkins Park, Pennsylvania. The honeymoon trip included tours of Lake Placid, Canada, and other points of interest. The couple is now residing in Elkins Park.

FRIGIDAIRE EXPANDS ENGINEERING DEPT.

Expansion of the Engineering Department of Frigidaire Division of General Motors and six new appointments have been announced by Mason M. Roberts, the Division's General Manager and GM Vice President.

E. F. Schweller, manager of Frigidaire's Household Engineering Department, and J. L. Gibson, manager of the Commercial Refrigeration and Air Conditioning Engineering Department, have been named assistant chief engineers.

F. I. Rataiczak, another veteran engineer, has been appointed as manager of the Household Engineering department, succeeding Mr. Schweller. Succeeding Mr. Gibson as manager of the Commercial Refrigeration & Air Conditioning Engineering department is M. W. Baker. Announcement was also made of the transfer of R. J. Woxman, section engineer in charge of process specification activities, to Frigidaire, Ltd., the Division's Canadian subsidiary, where he will be in charge of product engineering and process specification projects. H. W. Guenther, of the Materials and Process Engineering section will succeed Mr. Woxman.

S. M. Schweller, Frigidaire's Chief Engineer, continues to head the overall engineering operation in Dayton. Also continuing as assistant chief engineer is F. H. McCormick, who is supervising range, washer, water heater and other related appliance product engineering projects.

JERMAK, SPRINGER JOIN LE ROY

Le Roy Foods, Inc., 290 South 5 Street, Brooklyn, New York, announces that Jerry Jermak and Bob Springer have joined the organization.

Mr. Jermak and Mr. Springer, both well-known in the industry, will head the Great Lakes Division of Le Roy with offices and warehouses in Chicago. The warehousing facilities in this division have been enlarged to handle a complete line of novelties and equipment for the ice cream industry.



MINERAL SALTS

PERFECTLY BALANCED
for your desired results

BROACH ASSIGNED TO FLORIDA



BILL BROACH

Sutherland Paper Company announces the appointment of Bill B. Broach to its sales force. His territory will consist of the entire state of Florida.

Prior to joining Sutherland's sales department, Mr. Broach was employed by Sherman Paper Products, in the capacity of packaging engineer. With headquarters at Cincinnati, he serviced the bakery trade in the mid-west.

Mr. Broach has just finished an intensive training program, and will make his new headquarters at Jacksonville, Florida. Being assigned to the Florida area is a home-coming for him, as he was Tampa-born and educated. In Florida, Mr. Broach will sell the complete Sutherland line.

WESTON B. HASKELL DIES

Weston B. Haskell, a veteran for many years in the ice cream industry, died September 27. He was one of the pioneers in the formation of the New England Association of Ice Cream Manufacturers and was consistently active in association affairs. He recently retired from H. P. Hood & Sons, with whom he had been associated for many years.

A funeral service was held September 29 at his home, 111 Woodview Avenue, Hamburg, New York. Burial was in the Prospect Lawn Cemetery, Hamburg.

There is no success built upon so solid a foundation as that established by a superior product. We know that is true in Mineral Salts, and we know it is true in Ice Cream.

We work with you for your satisfaction and for our mutual success.

Horner SALES CORPORATION

PITTSBURGH 8 Manufacturing Chemists PENNSYLVANIA

NEW CHEMIST AT VIRGINIA DARE

The Virginia Dare Flavor and Extract Company, at Bush Terminal, New York, has announced the appointment of a new Technical Director to expand research work. He's Harold L. Janovsky, formerly Manager and Chief Chemist at Aroscent, Inc. (a subsidiary of the Davis and Lawrence Company of Dobbs Ferry, New York) and before that with Seeley & Co., Inc., Nyack, New York. This assignment was announced by Dr. B. H. Smith, President of Virginia Dare. Mr. Smith stated that Mr. Janovsky's long experience in the essential oil, aromatic, and flavor industry would enable him to help Virginia Dare meet the need for increased research in the highly competitive food industry.

HURWITZ CELEBRATES ANNIVERSARIES

The Lawrence Sanitary Milk and Ice Cream Company, Lawrence, Kansas, celebrated its 30th year of business last summer, according to S. W. Hurwitz, executive of the firm. Mr. and Mrs. Hurwitz celebrated their 25th wedding anniversary on October 15 with a family party attended by 75 relatives and friends. Following the party, Mr. Hurwitz flew to Atlantic City to attend the 17th Dairy Industries Exposition.

DAVIS HEADS FUND-RAISING EVENT

Morris Davis, an executive of the Joe Lowe Corporation, was chairman of the dinner-dance committee of the Prospect Lodge F & AM (Masonic), at which event was presented a check for \$15,000 to the Grand Master of the Grand Lodge of Masons which will be allocated to the Rheumatic Fever Foundation of the Masonic Brotherhood Fund. The event was held October 21 in New York City's Hotel Pierre.

INVESTIGATE THIS WEIGHT SAVING KEYSTONE ALUMINUM BODY



Popular 1500 gal.
Aluminum Body

KEYSTONE "Lightest-of-Light" Aluminum Bodies — designed for maximum payload, low-maintenance cost, streamlined beauty in appearance, and moderate cost — are winning the favor of buyers everywhere for the honest value they offer per body dollar investment. Investigate! . . . Compare! . . . Get the full story on these popular lightweight champions before you spend a penny. Sizes and body styles to meet YOUR requirements.

KEYSTONE WAGON WORKS, Inc., 5625 Tacony St., Philadelphia, Pa.

STABILIZERS and EMULSIFIERS

Tell us the results you want, the particular qualities your Ice Cream and dairy products should have, and we will furnish you the Stabilizer and Emulsifier to bring you those results.

For long range and continuous satisfaction, let us prepare and hold your material for you, and ship as needed.

Horner SALES CORPORATION

PITTSBURGH 8 Manufacturing Chemists PENNSYLVANIA



W. L. MOLLOY DIES



W. L. MOLLOY

William L. Molloy, Sales Manager and Secretary of the Grand Rapids Cabinet Company, Grand Rapids, Mich., died in Grand Rapids on October 23 after an illness of a few weeks' duration. Funeral services were held October 25 in St. Stephens Church in Grand Rapids, and burial took place in a local cemetery.

Survivors include Mrs. Molloy, two sons, Robert and Thomas, and three grandchildren.

Mr. Molloy had been with the Grand Rapids Cabinet Company for twenty-five years.

ROBERT A. BRADLEY REPRESENTS CRC

Grand Rapids Cabinet Company, Grand Rapids, Michigan, has appointed Robert A. Bradley as sales representative in the Carolinas, Virginia, Georgia and Florida areas.

DREW APPOINTS DISTRICT MANAGER



W. R. MACDONALD

Ray F. Peasback, Manager of the Dairy and Special Products Division, E. F. Drew & Co., Inc., has announced the appointment of William R. MacDonald as District Manager.

Mr. MacDonald will be responsible for the sales and service of Drew Edible and Industrial Products in New York State, Northern New Jersey and Northeastern Pennsylvania.

Additional sales personnel are being added to Mr. MacDonald's territory in order to properly service the increased business in this area.

JOHN D. BRAWNER IS DEAD

John D. Brawner, Vice President and Treasurer of the Hendler Creamery Company, Baltimore, Maryland, died October 3. Funeral services were held October 6 at a local funeral establishment.

Mr. Brawner had been associated with the Hendler organization for twenty-eight years. He also was controller for the southeastern district of the Borden Company.

Survivors are his wife, Mrs. Mildred Brawner; a daughter, Mrs. John A. Archer; three granddaughters; and by his mother, Mrs. Carroll Whitney.

Clinton's DRIED CORN SYRUP

(Dextrose — Maltose — Dextrins)

For Controlled Quality Ice Cream

● Commercial use has proven Clinton Dried Corn Syrup far superior in producing quality ice cream of improved consistency and richer, smoother eating qualities. Its bland character enhances and preserves flavors. That's why ice cream made with Clinton Dried Corn Syrup is of such uniform high quality.

CLINTON

CLINTON FOODS, INC., CLINTON, IOWA

Business News

SEPTEMBER ICE CREAM PRODUCTION CLIMBS

Production of ice cream in the United States during September was estimated at 46,600,000 gallons—slightly more than the September output last year but 16 per cent less than the 1944-48 average for the month, the Bureau of Agricultural Economics reports.

Seasonally, ice cream production declined 25 per cent, compared with a drop of 31 per cent between August and September a year ago and an average decrease of 15 per cent between these months in the 5-year period, 1944-48.

Production in the first three quarters of this year totaled 431,510,000 gallons—down 5 per cent from the same period of 1949 and also down 5 per cent from the first nine months' average during 1944-48.

Sherbet production in the United States, estimated at 1,510,000 gallons for September, was 1 per cent more than the output of September last year but was 28 per cent less than the 1944-48 average for the month. The seasonal decline this year was 28 per cent, compared with a decrease of 20 per cent between August and September last year and an average drop of 32 per cent between these months in the 5-year period, 1944-48.

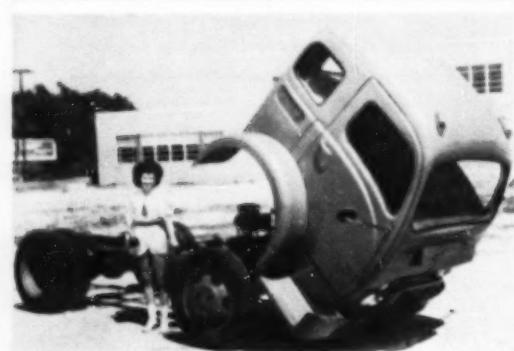
HEARING ON STANDARDS POSTPONED

The Federal hearing on standards for ice cream and other frozen desserts has been postponed. Originally scheduled for November 13, they have been delayed to enable certain interested parties to accumulate and present additional evidence. Tentative date for the re-scheduling of the hearing is January 7.

R. E. FUNSTEN NAMES REPRESENTATIVE

F. Lee Fresh, Liberty Trust Building, P. O. Box 756, Cumberland, Maryland, is currently representing the R. E. Funsten Company in Cumberland. The complete line of Funsten bulk shelled pecans, vacuum packed pecans and papershell pecans will be available through the new representative.

"MISS GEORGIA Rodeo of 1950" helped The White Motor Company introduce its new Model "3104" Truck. Miss Lois Lee, who works in the Atlanta, Georgia Branch office of White, won the title at the Georgia State Truck Rodeo this summer. Introducing the new model is more than an honorary job; she proves it in the photograph, as she tilts the power-lift cab on the new White Truck. The cab reportedly tilts in twenty seconds for complete front-end accessibility for maintenance and servicing.



BEATRICE FOODS ISSUES REPORT

In the three months ended August 31, 1950, the Beatrice Foods Company, Chicago, earned \$1,037,825.94, as compared to net earnings of \$1,393,385.11 in the similar period in 1949. Almost all departments showed increases in unit sales, except the ice cream department. Sales and profits in this phase of the Beatrice operation were less than last year's. C. H. Haskell, President, disclosed in the quarterly report to stockholders.

PHENIX DISTRIBUTOR MOVES

Refrigerated Equipment Sales Corporation, 19 West 44 Street, New York City, moved last month to new and more adequate quarters in the same building, it was announced by Charles Q. Sherman, head of the firm. Now located on the fourteenth floor of the building, the organization is the local distributor of Phenix soda fountains and other lines.

PARAFFINED COUNCIL REPORTS ON PUBLICITY

The Paraffined Carton Research Council has summarized the results of its consumer information program in an attractive folder which contains excerpts from newspaper and magazine stories dealing with pre-packaged ice cream. Activities conducted under the Council's program now result in the issuance of information to more than 3,000 food editors and writers every month, it is reported in this folder. A description of these activities was published in *ICE CREAM FIELD*'s August, 1950 issue.

According to the Council summary, a tabulation of newspaper, magazine and syndicate clippings on pre-packaged ice cream received during the twelve months ended August 15, 1950, totals 135,117,165 circulation.

"It can be assumed," says the Council statement, "that since this circulation figure represents a fractional sampling of all newspaper and magazine articles on pre-packaged ice cream, the actual audience reached its approximately 380,000,000."

DIVERSEY BRANCH RE-LOCATES

North Central Division office of the Diversey Corporation, Chicago, has been moved from the Foshay Tower to Room 204, International Business Machines Building, 1200 Second Avenue, Minneapolis. R. E. Youngquist is manager of the North Central Division.

GUNDLACH PLANS EGG NOG PROMOTION

Taste goodness of traditional Egg Nog which is intimately associated with observance of American Fall and Winter holidays, particularly during the yuletide, will be accented by G. P. Gundlach & Company, Cincinnati pioneers in merchandising programs for the dairy industry.

The Gundlach organization's laboratories have supplied added refinements to the Egg Nog flavor base to provide what is described as "a cheerful flavor."

A consumer contact program involving bottle and knob hangars, rotogravure four-page folders, bottle snap-ons, dominations, posters and weatherproof displays together with basic material for newspaper and radio uses will be implemented by the Gundlach merchandising and advertising departments.

"We have set our sights to make America Egg Nog conscious" G. P. Gundlach, President of the organization, commented.

WELCH OPERATION PURCHASED

Charlotte Charles, Inc., manufacturers of the nationally known line of Charlotte Charles delicacies, has absorbed the operation of the Welch Fruit Products Company and will continue the business as the McCarthy Fruit Products Company, in Evanston, Illinois.

The owners of the McCarthy Fruit Products Company have been identified in the specialty food field for many years.

The McCarthy Fruit Products Company will offer ice cream manufacturers a complete line of ice cream flavors and seasonal specialties. A comprehensive line of flavors and specialties, merchandising plans, samples and price lists are now available for immediate distribution.

The company is occupying the former Welch plant at 1715 Church Street, Evanston.

MANN'S CANDIES TO EXPAND DISTRIBUTION

Immediate plans for expanding distribution of products throughout the United States have just been announced by Adolph Mann, President of Mann's Candies, Los Angeles. The West Coast firm has devoted its production for the past sixteen years exclusively to the manufacture of candy for ice cream. Its products are being widely used throughout the Pacific and in several eastern states.

The company's decision to expand its operation nationally is the result of a development of an exclusive process which permits the manufacture of peppermint stick and lemon flake candy which can be used in fruit feeders without shearing or breaking of pins.

This process, for which patent applications have been made, was developed a little over one year ago and candy manufactured by the process is now being used by such firms as Carnation, Arden and Golden State.

Peppermint stick and lemon flake candy are made by this exclusive process in both pillow and pellet form, thereby providing the manufacturer both soft or hard candy. Both of these may be used in fruit feeders without production shutdowns caused by clogging, shearing or breaking of pins, a company spokesman declared.

Mann's Candies also manufacture a full line of other candies including Butter Crunch, Almond or English Toffee, Hazelnut Toffee, Midget Marshmallows and Pecan Crunch.

All of the Crunches and Toffees made by the firm are specially ground to assure uniformity and to eliminate most of the fine powder. They also grind these candies to meet manufacturers' specifications.

Recently the company developed a new ice cream bar crunch which reportedly brings the ice cream manufacturer a savings in cost and provides a product that is lighter in weight so that it will float on top of the chocolate, thereby giving better coverage.

Expansion plans include the appointment of several manufacturer's representatives throughout the country, as well as the establishment of a number of distributors who are serving the ice cream industry. The company is at present represented by American Food Laboratories, whose headquarters are in New York. The firm represents Mann's Candies in New York, Pennsylvania, New Jersey and Connecticut. In the Northwest, it is represented by J. H. Lovett Company, 414 Joseph Vance Building, Seattle. W. A. Shade Company, 420 Market Street, San Francisco, are representatives for the Bay Area and for Northern California.

SHORTAGES CAUSE SHOW POSTPONEMENT

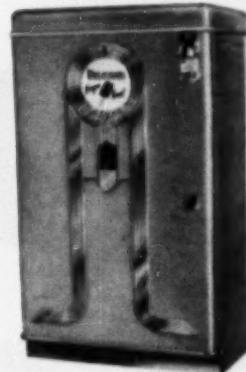
Increasing scarcities of building materials and possible curtailment of all non-residential building have caused the postponement of the 4th International Store Modernization Show, it was just announced by John W. H. Evans, managing director of the sponsoring Store Modernization Institute. The Show, scheduled for the Hotel Stevens, Chicago, next March, becomes one of the first trade exposition war casualties.

Many of the Show's exhibitors report extreme shortages in steel, aluminum, plywood and other of the basic materials used in the manufacture of store equipment and fixtures. They expect even greater difficulties by next year, when the Show would ordinarily be sales-productive. The 3 previous annual Store Modernization Shows were held at Grand Central Palace in New York with retailers, architects, contractors and business property owners attending from all 48 States and 24 foreign countries.

"Government controls and allocation of scarce materials will more than likely result in curtailment of all non-residential building," said Mr. Evans. "Besides, retailers and business property owners are unlikely to build or modernize while their city governments are appropriating funds for bomb shelters," he continued. "This makes the 1951 Store Modernization Show out of keeping with the urgent emphasis on defense production."

"But looking forward to a long era of peace, I am confident that there again will be a stepped-up activity in store modernization and construction everywhere. Where there has been over 3 billion dollars spent to modernize retail stores each year during the past five years, I predict that this figure will be doubled when our country resumes its natural and progressive building growth."

**ATLAS
"Col Snac"
VENDOR**
**FOR ICE CREAM
BARS-ON-STICKS
OR ICE CREAM
SANDWICHES**



**The ONLY Merchandiser With ALL the Practical Features
That Mean Maximum Sales with Minimum Investment**

- No Additional Packaging!
- Completely Automatic!
- Extra Big Capacity!
- Slug Rejector and Coin Changer at No Extra Cost!
- Fast, Easy Loading!
- Right Temperature Always!
- Light Where It's Needed!
- PLUS— $\frac{1}{4}$ hp G.E. Compressor equipped with servo valves for on-the-spot service; easily washable mechanism; stainless steel contamination proof; timers and working parts—many other exclusive features.

Write Today!

DAIRIES! The ColSnac gives you an opportunity to open up a very new market that can be easily handled with your present facilities! A profitably outlet for increased volume!

ATLAS TOOL & MFG. CO.

5147 Natural Bridge Blvd.
St. Louis 15, Missouri

JOE LOWE ACQUISITION OF ICN REPORTED

During the Ice Cream Convention at Atlantic City the Joe Lowe Corporation, New York, announced the acquisition of Ice Cream Novelties, Inc., effective as of November 1st.

Ice Cream Novelties, Inc., will continue to operate separately with the same line and most of the sales force and personnel, according to a Joe Lowe spokesman.

The experience of the Joe Lowe Corp. will greatly enhance the established line of stick confections sold by Ice Cream Novelties. Present plans call for expanding cooperation with all I.C.N. customers on advertising and merchandising for their established line of stick confections.

SOLDWEDEL NAMES VONACHEN

Harold A. Vonachen, Jr. has been named sales and merchandising manager for the new Duncan Hines Ice Cream division of the F. H. Soldwedel Co., Pekin, Illinois dairy. Mr. Vonachen will also be in charge of other Del product promotions in this area.

Mr. Vonachen is a Spalding Institute alumni and attended Notre Dame University. He is a graduate of Bradley University, majoring in Business Administration. He manages the concessions at the Robertson Fieldhouse for the Bradley Boosters Club.

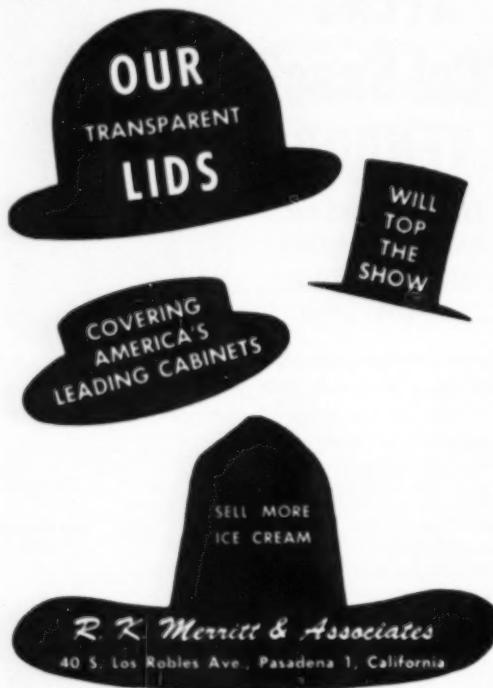
His residence is on Highview Road, East Peoria.

TOPS OF THE DISA SHOW!

You saw them at these booths:

Ace Cabinet Corp.
Anheuser-Busch, Inc.
Frigidaire Division

Nash-Kelvinator Corp.
C. Nelson Mfg. Co.
Schoester, Inc.



NEW PLANT FOR AMERICAN PRODUCTS

Ground has been broken and construction is now under way for an enlarged plant to serve the American Products Company for Dallas, Texas. This firm has announced plans to have a modern supply house in the Southwest. Completion of the new plant is scheduled for November 15 to enable the firm to dedicate the new and enlarged facilities to the ice cream and food processing trade on the twenty-fifth anniversary of the company.

"You can't do business in the Great Southwest without expanding," said Julius Tills, Managing Partner of this firm. "In the past quarter century, we have seen tremendous growth in the size of our customers' plants, in the volume of business they enjoy and a great improvement in the quality of the products they are making. This growth is continuing. The expanded facilities of our new plant are designed to better serve our customers and friends in this area and to help them keep growing."

The manufacturing and laboratory department, headed by Glenn Neal, who has had over twenty years of experience, will increase the line of products for the ice cream and food processing trade during the year. The trade demonstration schools to be held regularly in the new plant will be under the supervision of this department.

A new division, a Foreign Trades Department, will be opened and supervised by Clinton B. Ridgell, who has had a great many years of experience in the Export-Import field. Serving in the United States Customs Department for several years and as export manager for Pacific Coast firms currently, he has a wide acquaintance in the Far East, India, Europe and South American countries. The department will specialize in importing spices, coconut, nuts, essences, gums, and other materials produced by foreign manufacturers and will also export some of the products in surplus in America needed by foreign nations.

CLINTON PROVIDES HORTICULTURE AWARDS

Six scholarships for study in horticulture have been made available to University of Florida students through Clinton Foods, Inc. of New York, it was announced recently by R. C. Beatty, Dean of Men and chairman of the committee on scholarship at the Gainesville University.

The scholarships were offered to the University by Charles W. Metcalf, President of Clinton Foods Inc.

Offering a total of \$2000 per year in aid to students studying horticulture, the scholarships will break down into two undergraduate and four graduate grants. Each of the undergraduate scholarships will have a value of \$500 payable over a two year period. The graduate scholarships will pay \$250 per year.

Mr. Metcalf, widely known for his philanthropic interest in education, stated that the scholarships in horticulture at the University reflect Clinton Foods' interest in the citrus industry in Florida and desire to contribute to its development by encouraging students in that field.

Under the scholarship the University will be the second educational project to be undertaken by this company. A Clinton Foods science scholarship program has been in effect for some years in Iowa for high school students of that state, and the program inaugurated in Gainesville will constitute the only other such award by the company. Whereas the Iowa State scholarships are offered in the field of science, the scholarships here will be offered in horticulture under which citrus specialization courses are available.

TRUCE IN CALIFORNIA PRICE WAR

The price war which has had almost devastating effect on the California ice cream industry came to an abrupt end last month. Wholesale ice cream prices rose sharply—in some cases as much as twelve cents per gallon. When one prominent organization took the initiative in increasing prices, others followed suit, and the west coast industry is now on the road back to normalcy.

FROZEN NOVELTIES, INC., ESTABLISHED

Establishment of Frozen Novelties, Inc., at 2604 St. Clair, Cleveland, Ohio, has been announced. The firm has taken over the Checker Bar Ice Cream Company plant and will manufacture and supply a complete line of ice cream on-a-stick, cake rolls, cups, and water ices to other ice cream manufacturers within a 100-mile radius. Distribution will be made only to ice cream manufacturers and not to retailers, a company spokesman noted.

The firm will also manufacture diabetic ice cream in pint packages and will make it available to other manufacturers.

ICE CREAM AIDS DIGESTION

Science has added another major contribution to the food value of ice cream.

Recent scientific studies conducted with college women at Iowa State College, Ames, showed that riboflavin in ice cream is efficiently used by the human body. Ice cream contains an appreciable amount of riboflavin and practically all of it is available for use in the body, according to the study. This was not found true for other foods high in riboflavin which were tested at the same time. Less than half of their riboflavin was in usable form.

Milton Hult, President of the National Dairy Council, in commenting on the study, stated that in the manufacturing processes of ice cream none of the riboflavin is lost. It remains a nourishing food, possessing other nutrients, such as calcium and protein, in addition to its being one of America's most popular and delicious foods. Riboflavin, he added, provides the tonic which promotes health by putting plenty of oxygen in the cells.

NATIONAL DAIRY PENSION PLAN APPROVED

An extended pension program covering employees with fifteen or more years of service and increasing the benefits of those previously covered was approved by stockholders of National Dairy Products Corporation at a recent meeting, L. A. Van Bommel, President, announced. The offering of the new program in whole or in part to employees is subject to local determination.

The full program, Mr. Van Bommel explained, consists of two separate plans:

(1). A new non-contributory plan, with pension payments up to \$100 a month, including Social Security benefits, for retiring employees in all income brackets who qualify for length of service or on account of disability; and (2) a revision of the company's previous contributory plan calling for increased payments and increased benefits under this voluntary plan for employees earning more than \$3,600 a year.

"In adopting these proposals, National Dairy is adhering to the trend that is being followed by industry generally in regard to retirement policies," Mr. Van Bommel said. "The proposals are motivated in part, of course, by a natural desire to make the years of retirement more comfortable for loyal employees of long length of service. They will also strengthen the company by facilitating the retirement of employees who have given their best years of service and their replacement by younger men coming up through the organization."

SCOTCH-EE

TURNS BUTTERSCOTCH INTO "BETTER-SCOTCH"

Luscious butterscotch flavor for your ice cream in easy-to-use DRY BUTTER-SCOTCH by Virginia Dare. Scotch-ee blends quickly into your mix without dilution and needs no pre-heating. Another big advantage of this dry powder is elimination of machine "gumming up."

ask your representative or send for sample



ACORN MOVES

The Acorn Sheet Metal Manufacturing Company, Inc., has moved to new headquarters at 4605-11 West 21st Street, Chicago, Illinois. The new plant has 50,000 square feet of space.

Manufacturers of a complete line of vending carts, tricycles, trailers, and shoulder boxes, the firm is now set up with painting and assembly facilities, and new plant equipment, including an extensive conveyor system.

DELANEY COMMITTEE INVITES FOOD PROCESSORS TO TESTIFY

Food processors and distributors have been invited to present their views on a proposed amendment of the Food and Drug Act to provide advance testing of chemicals to be used in foods. The invitation was issued by the Select Committee to Investigate the Use of Chemicals in Food Products, headed by Congressman James J. Delaney (Democrat, New York).

Witnesses who have testified before the committee have in general asked that long-term toxicity tests be made, and approved by the government, before a chemical substance is added to a food product.

Since the burden of proof in such cases will be on the processor, the committee is anxious to learn the views of the food industry before it considers possible legislation. A number of processors and distributors have already been contacted, and the committee is issuing a general invitation to all others to request a hearing if they so desire.

Requests should be directed to the Select Committee to Investigate the Use of Chemicals in Food Products, Room 538, Old House Office Building, Washington 25, D. C.

LE ROY FOODS HOLD SALES MEETING



In conjunction with the firm's exhibit at the Dairy Industries Show, Le Roy Foods, Inc., 290 South 5th Street, Brooklyn, New York, manufacturers of novelty supplies and equipment, held a well-attended sales meeting. Two new items were introduced at the meeting, the new "Tiny Treat," a small sandwich which comes packed one dozen to a box, and the new "Long Treat," a long ice cream sandwich. At the meeting, sales and advertising plans for the coming year were presented and received with enthusiasm by the entire staff.

At the same time, an announcement was made that a complete line of frozen confection equipment and supplies would be available, without tie-ins or royalties, and would have behind it a complete premium and merchandising campaign.

The Exposition and sales meeting was attended by Hyman Badner, President; Leo Overland, Vice-President; Stanley Overland, Sales Manager; and Jerry Jermak, Bob Springer, Floyd Marx, Rufus Vaughn, A. Beckmann, G. Loveless, Sam Nygood, Al Kaplan, Jack Humphreys, Nat Ross, Frank Sportolari, Dan Overland, S. Richenberg, J. Slitzan, Jack Levine and T. Schenk.

FRIGIDAIRE OUTLINES SALES PLANS

A series of five regional field meetings, for the purpose of discussing present and future commercial refrigeration and air conditioning sales programs, was conducted by Frigidaire Division of General Motors the latter part of October and early in November.

Key sales representatives from 44 Frigidaire districts throughout the nation attended two-day business sessions in Atlanta, New York, Chicago, Kansas City and San Francisco, starting October 23 and terminating November 7.

P. M. Bratten, General Sales Manager of Frigidaire, leads a group of factory executives who participated. Others included L. A. Clark and H. F. Lehman, Assistant General Sales managers; W. F. Switzer, Commercial Sales manager, and H. M. Kelley, Appliance Sales manager; B. C. Wagner, Manager, Commercial Retail Sales; E. C. Lewis, Ass't. Manager, Sales Training; R. A. Blakelock, Supervisor, Case and Fixture Sales; R. A. Kramer, Commercial Product Application.

Frigidaire Regional Managers also participated in their respective meetings, F. M. Davison at Atlanta; R. H. Huston at New York; H. T. Mattern at Chicago; W. G. Jennings at Kansas City, and W. I. Buchanan at San Francisco.

how to cut costly laboratory time

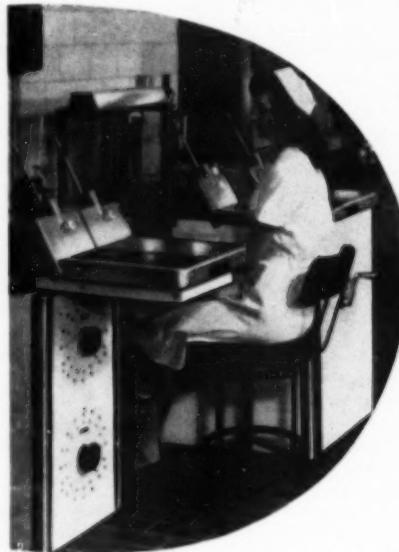
1. Total Solids Test ... 30 minutes with Mojonnier Tester
... three hours by "official" method.
2. Butter Fat Test ... 25 minutes with Mojonnier Tester
... seven hours by old way.

Accuracy-proved for thirty-five years. No other testing method offers you the speed, accuracy and simplicity of the Mojonnier Model D Milk Tester — recognized value of the Dairy Industry here and abroad.

Write today to: Mojonnier Bros. Co., 4601 W. Ohio St., Chicago 44, Ill.

mojonnier TESTERS

Standard Throughout the World!



Mojonnier products for the dairy laboratory include: COMPOSITE SAMPLE BOTTLES • BOTTLE WASHERS • BUTTER PRINT SCALES VISCOSIMETERS • OVERRUN TESTERS • CAN FILLING PLASTIC COVERS • BOTTLE SHAKERS • BOTTLE HEATERS • TEST BOTTLE BATHS • COMPOSITE TEST LIQUID • SAMPLERS, TRIERS, DIPPERS ACID BOTTLE TRUNNIONS • MILK WEIGH RACKS, TICKETS

Classified Advertising

FOR SALE

FOR SALE: Sweden Ice Cream Freezers complete with condensing units, 4-20 quart capacity, brand new in crates. Also #21060 Taylor on 60 gallon hardening cabinet. Very low prices. Also 6 foot Bolstal Fountain \$195.00. Interstate Appliance Co., 600 Broadway, N.Y. Walker 5-2755.

FOR SALE: One Pure-Pak Automatic ice cream packaging machine like new. Used only one season. Complete with filling nozzles for 3 flavors and single flavor. Priced right. Legion Ice Cream Co., 4251 S. State St., Chicago, Ill. Phone BO. 8-2600.

FOR SALE: One 1½ Bump Pump and one 3" Bump Pump; One 20 H.P. G.R. Motor, 1145 R.P.M., 2 phase, 220 v. Box 325, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

FOR SALE: Milk and ice cream plant located in Northwestern Wisconsin. Yearly sales \$200,000. Price \$75,000. Write Box 123, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

FOR SALE: Two refrigerated ice cream truck bodies—1000 gallon and 650 gallon Capacity, equipped with cold plates and 1½ H.P. compressor—with or without 1946 Ford 1½ Ton Chassis. Reply Box 331, ICE CREAM FIELD, 19 W. 44th Street, New York City.

FOR SALE: 300 gallon Pfaudler S.S. Rotocool Pasteurizer; 100 and 200 gallon round S.S. Pasteurizers; Also 100 to 300 gallon Cherry-Burrell S.S. Spray Pasteurizers; 20 and 40 qt. Emery Thompson Direct Expansion Freezers; 125 to 1500 gallon Homogenizers or Vissolizers; Mojonier S.S. Cabinet Coolers 8 wings each 72 tubes high; 9.9 Kewanee Scotch Marine Boiler and Oil burner; Fillers, bottle washers, vacuum pans, pumps, etc.; Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N.Y. Telephone: MUrray Hill 2-4616.

RATES: machinery, equipment and supplies for sale or wanted to buy, 6c a word (including address) for each insertion; help and positions wanted, 2c a word (including address). Bold face type double regular rates. Minimum charge \$1.00.

FOR SALE: Ice cream vending business in Atlanta, Ga. Large number of carts, some scooters and car. Long season. Ideal climate. Old established profitable business. Write Box 339, ICE CREAM FIELD, 19 W. 44th St., New York 18, N.Y.

FOR SALE: 1: 46 Frigidaire ice cream cabinets. 2: Complete equipment for milk and ice cream plant. Sold separate or together. Sealed bids will be received at our office up to 10:00 A.M. Monday, November 20th. Right reserved to reject any and all bids. Plant and duplex residence can be purchased, leased, or not considered in this sale. Located in a boom city nearest to Fort Campbell, Kentucky. Complete list and details mailed on request. Clarksville Pure Milk Co., Clarksville, Tennessee.

FOR SALE: One Pure-Pak Automatic Ice Cream Packaging machine complete with: Filling nozzle for three flavors. Filling nozzle for single flavor. Three nipple nozzles. One auxiliary manifold. One 1 H.P. and one 1/3 H.P. motor—220V—60 Cycle—3 phases. The machine is two years old and in perfect mechanical condition. At top speed it is capable of filling eighty pints per minute. Write Box 337, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

FOR SALE: Exclusive franchise of THE SPINNING WHEEL, the national milk drink, in the South's second largest city. Write Box 336, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

FOR SALE: 1946 Federal tractor with Universal trailer body, 2500 gallon job complete with plates and compressors. 1938 International 1½ ton truck with dry ice body, two doors, 450 gallon capacity. 1936 Ford, 250 gallon dry ice body, special delivery. 1930 ½ ton Ford with peddling body, (8,000 miles) 1947 Jeep with ice cream body. 1949 Crosley (like new) equipped with ice cream body, hot dog boilers, soda box. (11,000 miles) Also two faced neon signs easily converted. Workman ice cream tricycles and tricycle parts. Can be purchased very cheap. Priced reasonable. Further details sent on request. Colonial Ice Cream Co., 112 Middletown Ave., New Haven, Connecticut.

FOR SALE: 1946 International K7 Truck with 1500 gallon dry ice refrigerated body, new tires, excellent condition. Reply Box 338, ICE CREAM FIELD, 19 W. 44th Street, N.Y. 18, N.Y.

HELP WANTED

HELP WANTED: Salesman—With following among ice cream manufacturers, to represent nationally-known firm selling to ice cream manufacturers. Strong promotional line backed by advertising. Box 316, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

HELP WANTED: #1—Nationally advertised concern desires man to sell their processed fruits and extracts to the ice cream industry. Drawing account. Several choice territories open. Box 151, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

HELP WANTED: Salesmen and brokers wanted to represent manufacturer of ice cream candies. Liberal commission. Gurley Chocolates Co., 1600 3rd Street North, Minneapolis 11, Minn.

HELP WANTED: SALESMAN: We are interested in an aggressive, experienced ice cream salesman or ice cream merchandising man. Position requires good background in ice cream sales and merchandising work. Party must be experienced and a producer. Please state your qualifications, outline of employment and other relevant information. Carnation Company, Dept. F.M., Los Angeles 36, California.

HELP WANTED: Brokers: Midwest and Southern territories open. Fast selling line of sugar cones. Write Forrest Baking Corp. 3032 W. Lawrence Ave., Chicago 30, Ill.

SITUATIONS WANTED

SITUATION WANTED: College graduate, forty-four, extensive experience in the purchase of equipment, supplies and ingredients for both ice cream and milk operations, desires to enter the selling field. Many good contacts New York State and New England. Box 341, ICE CREAM FIELD, 19 W. 44th St., New York, N.Y.

POSITION WANTED: Ice cream and dairy administrative executive, thoroughly trained all departments. Accounting background. Known production refrigeration, sales promotion, distribution, office management, credits. Available on short notice. Excellent reference. Box 340, ICE CREAM FIELD, 19 W. 44th St., N.Y. 18, N.Y.

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